ADMINISTRATIVE RECORD

PYRIDIUM MERCURY DISPOSAL SITE # 2

Harriman, Orange County, New York

Prepared for:

Irmee Huhn, On-Scene Coordinator
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Prepared by:

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Administrative Records in Local Repositories

The "Administrative Record" is the collection of documents which form the basis for the selection of a response action at a Superfund site. Under Section 113(k) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), the EPA is required to establish an Administrative Record available at or near the site.

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The Agency welcomes comments at any time on documents contained in the Administrative Record file. Please send any such comments to Irmee Huhn, Removal Action Branch, U.S. EPA Region II, 2890 Woodbridge Avenue, Edison, NJ 08837.

For further information on the Administrative Record file, contact Irmee Huhn, On-Scene Coordinator, U.S. EPA Region II, at (908) 906-6813.

PYRIDIUM MERCURY II SITE

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INDEX OF DOCUMENTS

The index of documents contains the following information about each document:

Document #:	Site Code-Section, First Page-Section 2 - Last Page **EXAMPLE (ABC 1.1001 - 1.1002)**
Title:	Abstract of Document Contents
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Note: Items in the Administrative Record are for public access, and should be removed from the file only for copying. The cost of reproduction of the documents in the file is the responsibility of the person requesting the copy.

PYRIDIUM MERCURY II SITE
ADMINISTRATIVE RECORD FILE
LIST OF DOCUMENTS

Document #: PM2 - 1.1001 - 1.1003
Title: Mitigating Potential Exposures
Category: Removal Response
Author: G. Anders Carlson, Ph.D., State of New York Department of Health
Recipient: Ms. Kathleen C. Callahan, Director, Emergency & Remedial Response Division, United States Environmental Protection Agency
Date: November 30, 1994

Document #: PM2 - 1.2001 - 1.2031
Title: Request for a Removal Action at the Pyridium Mercury Disposal Site II - Action Memorandum
Category: Removal Response
Author: Irmgard P. Huhn and Dan Harkay, On-Scene Coordinator
Removal Action Branch, U.S. Environmental Protection Agency
Recipient: Jeanne M. Fox, Regional Administrator
U.S. Environmental Protection Agency
Date: September 29, 1995

Document #: PM2 - 2.1001 - 2.1009
Title: Community Relations Plan
Category: Public Participation
Author: Region II Superfund Technical Assessment and Response Team
Recipient: General Public
Date: January 1995

Document #: PM2 - 2.2001 - 2.2001
Title: Notice of Public Availability
Category: Public Participation
Author: N/A
Recipient: General Public
Date: January 1996

Document #: PM2 - 2.3001 - 2.3002
Title: The Times Herald Record - A poison sewn into the soil
Category: Public Participation
Author: Christopher Mele
Recipient: General Public
Date: October 8, 1994

Document #: PM2 - 2.3003 - 2.3003
Title: The Times Herald Record - Memory losses alarming
Category: Public Participation
Author: Christopher Mele
Recipient: General Public
Date: October 11, 1994

Document #: PM2 - 2.3004 - 2.3005
Title: The Times Herald Record - Harriman soil tests set
Category: Public Participation
Author: Amy Beth Terdiman
Recipient: General Public
Date: October 14, 1994

Document #: PM2 - 2.3006 - 2.3006
Title: The Times Herald Record - Love Canal lessons shared
Category: Public Participation
Author: Amy Beth Terdiman
Recipient: General Public
Date: October 19, 1994

Document #: PM2 - 2.3007 - 2.3007
Title: The Times Herald Record - Experts expand soil tests
Category: Public Participation
Author: Amy Beth Terdiman
Recipient: General Public
Date: October 25, 1994

Document #: PM2 - 2.3008 - 2.3008
Title: The Times Herald Record - New year will bring new start
Category: Public Participation
Author: Amy Beth Terdiman
Recipient: General Public
Date: December 31, 1994

Document #: PM2.3009 - 2.3009
Title: The Times Herald Record - Toxic site residents prepare to relocate
Category: Public Participation
Author: Amy Beth Terdiman
Recipient: General Public
Date: N/A

Document #: PM2 - 2.3010 - 2.3010
Title: The Times Herald Record - Mercury deposit remains a mystery
Category: Public Participation
Author: N/A
Recipient: General Public
Date: October 12, 1994

Document #: PM2 - 2.3011 - 2.3011
Title: The Times Herald Record - Village water mercury free, mayor tells residents
Category: Public Participation
Author: N/A
Recipient: General Public
Date: October 12, 1994

Document #: PM2 - 2.3012 - 2.3012
Title: The Times Herald Record - EPA searches for extent of contamination
Category: Public Participation
Author: Amy Beth Terdiman
Recipient: General Public
Date: October 13, 1994

Document #: PM2 - 3.1001 - 3.1002
Title: EPA Regional Guidance Documents
Category: Technical Source and Guidance Documents
Author: U.S. Environmental Protection Agency
Recipient: General Public
Date: N/A

EPA REGIONAL GUIDANCE DOCUMENTS

The following documents are available for public review at the EPA Region II Field Office, Raritan Depot, Woodbridge Avenue, Edison, New Jersey during regular business hours. Contact Irmee Huhn at (908) 906-6813 for more information.

* Glossary of EPA Acronyms.

* Superfund Removal Procedures--Revision #3. OSWER Directive 9360.0-03B, February 1988.

* Hazardous Waste Operations and Emergency Response.
  Notice of Proposed Rule making and Public Hearings.
  29 CFR Part 1910, Monday, August 10, 1987.

* Guidance on Implementation of Revised Statutory Limits on Removal Action.
  OSWER Directive 9260.0-12, May 25, 1988.

* Redelegation of Authority under CERCLA and SARA.
  OSWER Directive 9012.10, May 25, 1988.

* Removal Cost Management Manual.
  OSWER Directive 9360.0-02B, April, 1988.

* Field Standard Operating Procedures (FSOP).
  #4 Site Entry.
  #6 Work Zones.
  #8 Air Surveillance.
  #9 Site Safety Plan.

* Standard Operating Safety Guides -- U.S. EPA Office of Emergency and Remedial Response, July 5, 1988.

* CERCLA Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund).

* SARA: Superfund Amendments and Reauthorization Act of 1986.

* NCP: National Oil and Hazardous Substances Pollution Contingency Plan. - Publication No. 9200.2-14.

* Guidance on Implementation of the "Contribute to Efficient Remedial Performance" Provision - Publication No. 9360.0-13.

Additional Guidance Documents are listed below and are available for review at the EPA Region II Removal Records Center.

* The Role of Expedited Response Actions (EPA) Under SARA - Publication No. 9360.0-15.

* Guidance on Non-NPL Removal Actions Involving Nationally Significant or Precedent Setting Issues - Publication No. 9360.0-19.

* ARARS During Removal Actions - Publication No. 9360.3-02.

* Consideration of ARARS During Removal Actions -Publication No. 9360.3-02FS.

* Public Participation for OSCs - Community Relations and the Administrative Record - Publication No.9360.3-05.

* Superfund Removal Procedures - Removal Enforcement Guidance for On-Scene Coordinators - Publication No. 9360.3-06.

* QA/QC for Removal Actions - Publication No. 9360.4-01.

* Compendium for ERT Air Sampling Procedures - Publication No. 9360.4-05.

STATE OF NEW YORK
DEPARTMENT OF HEALTH

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November 30, 1994

Ms. Kathleen C. Callahan, Director
Emergency & Remedial Response Division
United States Environmental
Protection Agency
Region II
26 Federal Plaza
New York, New York 10278

RE: Mitigating Potential Exposures
~~Pyridium Mercury Site #~~
NYSDOH Site #336822N
(V)Harriman, Orange County

Dear Ms Callahan:

On October 21, 1994, my staff investigated a report of a possible second Pyridium Mercury Disposal site at 40 South Main Street in the Village of Harriman, Orange County. A mother and her two children, ages 6 and 7, are the only current residents. Allegedly, eight to fifteen truckloads of the Pyridium wastes were used as fill in the front yard of a single family residence during the early 1950's. Shoveled test holes were dug with the assistance of the property owner and the Village of Harriman Code Enforcement Officer. A Nepera, Inc. official was present during this preliminary inspection. Whitish gray Pyridium-like wastes were discovered a few inches below the ground surface at several locations in the front yard of this late 1800's home. Surface wastes were observed only where a large willow tree root broke through the grass cover. This spot was immediately covered over by investigators to minimize casual contact.

At our request, the United States Environmental Protection Agency (EPA) collected one surface soil, two subsurface soil, and two subsurface waste samples on October 26, 1994. The results of the testing demonstrated that there are significantly elevated levels of mercury in the subsurface wastes (two samples, 227 and 456 parts per million (ppm) of total mercury). The surface soil sample collected within the fenced yard, where the two children and family dog spend much of their play time, contained 27.5 ppm of total mercury. Because mercury is typically found in soils at levels less than 1 ppm, we and a representative of the federal Agency for Toxic Substances and Disease Registry recommended confirmatory surface soil sampling within the play yard. On October 29, 1994 the EPA collected nine additional surface soil (0 to 3 inches below any vegetative cover) samples to further assess the extent of surface contamination so that appropriate public health decisions could be made. Total mercury levels ranged from 0.1 to 117 ppm with an average of 35.1 ppm. Mercury contamination appears to increase markedly from the front porch outward

toward the reported area of historic waste disposal. Based on field observations, less obvious mercury contamination detected in surface soils within the fenced play area may be the direct result of the family's pet repeatedly digging in the yard.

Exposure to either inorganic or organic mercury can permanently damage the brain, kidneys, and developing fetus. The most sensitive target of low-level exposure to inorganic mercury appears to be the kidneys. Exposure to mercury in the soil can occur through a number of routes. There is the potential for direct oral exposure via ingestion of soil, dust, and garden produce grown in contaminates soil. Mercury can be absorbed into the body via dermal contact through activities associated with soil disturbances such as gardening, yard work, and play. The potential for inhalation of mercury particulates and mercury vapor is also a concern.

The elevated levels of mercury in soil are a public health concern. To minimize potential human exposure to these chemical wastes, the tenant and the property owner have been advised to avoid physical contact with front yard soils and to avoid disturbing any soils whatsoever. Based on the results of the EPA's follow-up sampling, the mother has been advised to keep her children and dog out of the fenced play area. Vegetable gardening is not recommended. These temporary advisories should be followed by a permanent solution as the presence of these wastes on a residential property pose a current and future threat to public health.

With this information, I am seeking the EPA's assistance in reducing or eliminating the conditions causing this potential human health hazard in the Village of Harriman. I am further asking that the EPA either enter into an Order on Consent with Nepera, Inc. or else respond to this situation using federal Superfund monies to assure that the presence of this hazardous substance within a residential neighborhood is satisfactorily addressed to eliminate the exposure potential. It is important to note that as a result of public meetings and media attention associated with the first Pyridium Mercury Disposal (trailer park) site which is just up the road, the community has a heightened desire for a thorough investigation and clean-up of this property as well as any others that may be discovered with similar wastes in the future.

We look forward to working with the EPA toward a satisfactory resolution of this sensitive public health issue. Should you wish to discuss the matter further, do not hesitate to contact me at (518) 458-6310.

Sincerely,

G. Anders Carlson

G. Anders Carlson, Ph.D.
Director
Bureau of Environmental Exposure
Investigation

sms/94300PRO0671

cc: Dr. N. Kim
Mr. S. Bates/Mr. M. Valkenburg
Mr. J. Crua
Mr. M. Knudsen
Ms. N. Knapp
Mr. S. Abrams
Mr. M. Schleifer - OCHD
Mr. M. O'Toole - DEC
Mr. S. Ervolina/ Ms. S. McCormick - DEC
Mr. A. Klauss - DEC Region 3
Mr. G. Zachos/Mr. J. Rotola - EPA Region II
Mr. A. Block/Mr. S. Jones - ATSDR
Mr. D. Humphrey - Mayor of Harriman

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NEW YORK 10007-1866

ACTION MEMORANDUM

DATE: SEP 29

SUBJECT: Request for a Ceiling Increase for a Removal Action at the Pyridium Mercury Disposal Site No. 2, Village of Harriman, Orange County, New York

FROM: James D. Harkay, On-Scene Coordinator
Irmgard P. Huhn, On-Scene Coordinator
Removal Action Branch

TO: Jeanne M. Fox
Regional Administrator

THRU: Kathleen C. Callahan, Director
Emergency and Remedial Response Division

Site ID No: EZ

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the removal action and ceiling increase described herein for the Pyridium Mercury Disposal Site No. 2 (Site), 40 South Main Street, Village of Harriman, Orange County, New York, 10926. The Site is not on the National Priorities List (NPL) and there are no nationally significant precedent-setting issues associated with the proposed removal action.

The Site consists of a residential property which has been backfilled with mercury-contaminated industrial waste. A two-story house, located on the property, is rented and occupied by a woman and her two children. An interim action was conducted on verbal authorization to secure and stabilize the Site.

Activities proposed in this Action Memorandum focus on the excavation, stockpiling, transportation and disposal of the contaminated soil, the temporary relocation of the current Site residents if relocation is necessary to avoid potential exposure to contaminants during excavation activities, the collection of post excavation soil samples, and site restoration.

As described in Section III, below, the Site meets the criteria for a removal action under the Comprehensive Environmental Resource Compensation and Liability Act (CERCLA) as described in Section 300.415 of the National Consistency Plan (NCP). The funding necessary to mitigate the threats associated with the Site is $442,000, of which $272,000 is from the Regional removal allocation.

II. SITE CONDITIONS AND BACKGROUND

The Comprehensive Environmental Response, Compensation and Liability Information System identification number for this time-critical removal action is NY0001062850. The activities proposed in this Action Memorandum will be the second removal action undertaken by U.S. Environmental Protection Agency (EPA) at the Site. The first removal action was initiated by EPA on February 27, 1995 upon verbal authorization from the Division Director. The action involved the installation of a fence around an uncontaminated area of the property to permit the children and family dog to play in a safe location. Additionally, as a precautionary measure, the carpets and vinyl flooring in the house were vacuumed and/or washed to remove any residual mercury which may have been tracked into the house by the children's or pet's outdoor activities. The removal action was completed on March 9, 1995.

The ceiling increase is necessary to mitigate the threats by implementing a removal action to excavate, stockpile and dispose of the contaminated soil. Should no action be taken, the on-site residents will continue to be exposed to hazardous substances present at the Site. In addition, surface water runoff and anthropogenic redistribution will further contribute to the contamination of neighboring areas.

A. Site Description

1. Removal site evaluation

On October 21, 1994, a representative of the New York State Department of Health (NYSDOH) and the Village of Harriman Code Enforcement Officer conducted an investigation of the Site. A whitish-grey solid, similar in appearance to the waste found at the Pyridium Mercury Disposal Site No. 1 (Pyridium No. 1), was discovered at the surface where a tree root broke through the soil. The waste was also observed in the front yard a few inches below the surface in small holes dug by the residents' pet dog.

On October 26, 1994, at the request of NYSDOH, the EPA and the Technical Assistance Team (TAT) collected three surface soil samples and two waste samples to determine if the Site was contaminated with mercury. Mercury was detected at concentrations ranging from 0.14 mg/kg to 27.5 mg/kg in the

surface soils. Mercury was detected at concentrations ranging from 227 mg/kg to 456 mg/kg in the waste samples, collected from depths of one to six inches below the surface.

On October 29, 1994, nine additional surface soil samples were collected from a fenced portion of the yard which is used as a play area by the children and the pet dog. Mercury was detected in the surface soils at concentrations ranging from 0.06 mg/kg to 117 mg/kg.

On November 17, 1994, the EPA Environmental Response Team (ERT) and the Response Engineering and Analytical Contractor (REAC) collected two dust samples inside the house. Mercury was detected at concentrations of 1.38 mg/kg and 2.06 mg/kg in the dust samples.

On November 30, 1994 the Site was formally referred to the EPA for CERCLA removal action consideration by the NYSDOH (Appendix A). The New York State Department of Environmental Conservation concurred with the referral.

On December 7, 1994, ERT, REAC, and TAT advanced eleven soil borings on the Site to determine the vertical extent of contamination. Soil samples collected from the borings were screened for mercury using a Spectrace Model 9000 X-Ray Fluorescence Analyzer (XRF). Based on field screening results and previous sampling conducted at the Site, it is estimated that approximately 500 cubic yards of waste and contaminated soil are present at the Site.

Site residents have been informed of the results of EPA's field investigation activities and have been advised to limit their usage of the contaminated area on the property. A NYSDOH physician has discussed site-specific health concerns with the residents.

2. Physical location

Pyridium No. 2 is located in a mixed residential/commercial area on South Main Street, near the intersection of Route 17M and South Main Street (Appendix B, Figure 1). The Site is bordered to the northwest by a vacant lot, to the northeast by South Main Street, to the southeast by Ramapo Lane, and to the southwest by a gasoline service station. Two major thoroughfares, New York Routes 17 and 17M, are located less than one half mile from the Site. A grade school and playground are located within one half mile of the Site.

3. Site characteristics

The property encompasses 0.25 acres. The Site includes a nineteenth century farmhouse, which predates the waste disposal

activities. The two-story farmhouse has a stonewall basement with a concrete floor. The property is owned by Mr. Greg Epsaro of 4 Averill Avenue, P.O. Box 104, Harriman, New York. For the past three years, a woman and her two small children, ages six and seven, have rented and occupied the house.

In the early 1950's, approximately eight to 15 truckloads of waste were allegedly dumped in an "L" shape down and across the front yard. The waste was allegedly a mercuric or mercurous salt generated during the production of pyridium by the former Pyridium Corporation. The waste was used to backfill low-lying areas of the front yard.

The area of surface contamination was determined to encompass approximately 5,900 square feet. Utilizing results from the boring and XRF survey, the vertical extent of contamination was determined. The field generated data indicates that approximately 500 cubic yards of waste and contaminated soil are at the Site.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant

Mercury, a CERCLA-designated hazardous substance as defined by Section 101(14), is present at the Site. The mercury contaminated waste is visible in surface soils and has been identified in subsurface soils. Site investigations indicate that approximately 500 cubic yards of waste are present at the Site. The waste is unconfined and the mercury contaminated waste and soil present at the surface could migrate off-site by anthropogenic redistribution and surface water runoff, thus resulting in the contamination of a larger area.

5. NPL status

The Site is not listed on the NPL. A Preliminary Assessment (PA) may be conducted to determine the need for a Site Inspection (SI) for possible NPL listing. The Site has been evaluated by the Agency for Toxic Substances and Disease Registry (ATSDR). The ATSDR states that the Site presents a public health hazard due to the elevated concentrations of mercury in soils. The health consultation is included as Appendix C.

6. Maps, pictures and other graphic representations

Figures 1 and 2 in Appendix B provide the location and configuration of the Site.

B. Other Actions to Date

1. Previous actions

On November 28, 1994, EPA, ATSDR and NYSDOH held a public availability session to address community concerns regarding the potential health effects associated with Pyridium No. 1 and 2. The analytical results of the soil sampling events were made available to the public during the meeting.

Results of the EPA's sampling were submitted to ATSDR and NYSDOH for a health consultation. In August 1995, a Health Consultation Report was prepared by the NYSDOH under a cooperative agreement with the ATSDR (Appendix C). The report states that the Pyridium Mercury Disposal Site No. 2 is a public health hazard due to the elevated concentrations of mercury in soils. On-site residents are suspected to be at risk of kidney damage through mercury ingestion, inhalation and dermal contact.

On February 27, 1995, EPA, an Emergency Response Cleanup Services contractor (ERCS) and TAT mobilized to restrict site access by modifying the existing fence to enclose the area of known contamination which was identified within the front portion of the property.

Additionally, in an effort to minimize the potential for continued exposure, a chain-link-fence enclosure was constructed in an uncontaminated portion of the rear property to provide a clean, secure area for the children and family pet to play.

Although mercury concentrations identified in dust samples collected from living areas in the residence were not at levels of public health concern, carpets and vinyl flooring were vacuumed and/or washed as a precautionary measure to remove any residual mercury which may have been tracked into the house by the children's or pet's outdoor activities. The total project ceiling for this action was $50,000.

2. Current actions

There are no federal or private actions taking place currently at the Site.

C. State and Local Authorities' Role

1. State and local actions to date

In October 1994, the NYSDOH and the Village of Harriman Code Enforcement Officer conducted an investigation and discovered the waste at the Site. NYSDOH prepared the Health Consultation in conjunction with ATSDR and participated in public meetings and

public availability sessions. A NYSDOH physician consulted with site residents regarding site-specific health concerns.

2. Potential for continued State/local response

State and local government agencies are not able to finance and undertake timely response actions to eliminate the threats posed by the Site. Both government agencies will provide support services to EPA during the mitigation of the threat.

The NYSDOH will continue to offer health education services to the affected residents and if necessary, hold additional public meetings to keep the community informed of site activities. The NYSDOH will investigate similar sites in the community as they are identified.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The Site meets the criteria for a removal action under CERCLA as described in Section 300.415(~~b)(2)~~ of the NCP. The Site poses a threat to the public health and the environment. On-site residents, local residents and animals could come in direct contact with the hazardous substance at the Site. Section 300.415(b)(2)(i). High concentrations of the hazardous substance on ground surfaces have migrated and have contaminated a larger area through surface water runoff and anthropogenic redistribution [Section 300.415(b)(2)(iv)].

A. Threats to Public Health or Welfare

Elevated concentrations of mercury, a CERCLA-designated hazardous substance, have been documented in surface and subsurface soils. On-site and local residents may have been exposed to mercury through the ingestion of mercury-contaminated soil, the consumption of plants grown in contaminated soils, dermal contact with the waste or inhalation of mercury contaminated dust.

During the initial assessment, three surface soil samples and two waste samples were collected on-site, from depths of one to six inches below the surface. The soil and waste samples were analyzed and detected mercury concentrations ranging from 0.14 mg/kg to 27.5 mg/kg and from 227 mg/kg to 456 mg/kg, respectively.

On October 29, 1994, nine additional surface soil samples were collected from a fenced portion of the yard which is used as a play area by the children and the pet dog living at the house. Mercury was detected in the surface soils at concentrations ranging from 0.06 mg/kg to 117 mg/kg.

On November 17, 1994, the EPA ERT and the Response Engineering and Analytical Contractor (REAC) collected two dust samples from inside the house in which mercury was detected at concentrations of 1.38 mg/kg and 2.06 mg/kg.

The ATSDR Record of Activity concluded the metal concentration detected at the Pyridium Mercury Disposal Site No. 2 poses a threat to public health. Toxicological data regarding mercury exposure document the risk of potential kidney and neurological system damage. The health effects of the hazardous substance are presented in Appendix C.

B. Threats to the Environment

Elevated concentrations of hazardous substances located at or near the ground surface could migrate and contaminate a larger area through surface water runoff and anthropogenic redistribution. Local animal populations could come into direct contact with hazardous substances located at or near the surface.

IV. ENDANGERMENT DETERMINATION

Actual or threatened release of a hazardous substance from the Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The purpose of the current action is to excavate, stockpile and transport and dispose of the contaminated soil on-site. Once the contaminated soil is excavated, post-excavation verification soil samples will be collected to document the effectiveness of the cleanup. The area of excavation will be backfilled and restored to natural grade upon receipt of acceptable post excavation soil sample results.

The excavation of soil would be based on site characterization data. During the site assessment, the extent of contamination was delineated using XRF screening techniques. The waste has been determined to be non-RCRA hazardous through waste pre-classification analysis. Prior to the excavation of soil, the Site will be marked out to identify the location of the contaminated area. As the excavation of soil advances, field screening of exposed soil will be conducted with an XRF to provide an expedited means of confirming that the cleanup level

is met. As the cleanup level is attained, the excavation will be backfilled with certified clean fill.

A description of the various activities that would be implemented during this action are presented below:

i. Excavate and arrange for the off-site disposal and stabilization of the contaminated soil as well as the temporary relocation of Site residents during excavation, if necessary to avoid potential exposure to contaminants during excavation activities.

ii. Implement a post-excavation soil sampling plan to verify that soil excavation activities were effective in removing the hazardous substance to acceptable levels.

iii. Backfill excavations with certified clean fill, grade with topsoil and revegetate with an appropriate ground cover.

These actions are necessary to remove the threat of contact with mercury contaminated soil and waste to the residents and local community in addition to the environment.

2. Contribution to remedial performance

The proposed removal action at the Site is consistent with the requirement of Section 104(a)(2) of CERCLA, which states, "any removal action undertaken...should...to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or the threatened release concerned." Since any remedial action undertaken would encompass the elements in this response, this removal action is consistent with any future remedial work.

3. Description of alternative technologies

Excavation and off-site stabilization and disposal of contaminated soil is the most cost effective and expedient manner to address the waste on-site. This method of waste treatment will cause the least disturbance to the surrounding community and has the lowest potential for operational/logistical difficulties.

4. Engineering Evaluation/Cost Analysis (EE/CA)

Since this is a time-critical removal action, this section is not applicable.

5. Applicable or relevant and appropriate requirements (ARARs)

ARARs that are within the scope of this removal action will be met to the extent practicable. Federal ARARs determined to be applicable for this removal action are RCRA, the Davis Bacon Act,

the Department of Transportation regulations, and the Occupational Safety and Health Act.

6. Project schedule

The actions proposed in this Action Memorandum can be initiated immediately upon authorization of funding allocation. Mobilization/demobilization, security, soil excavation, off-site solidification, disposal and site restoration are expected to be completed within two months, barring unforeseen circumstances.

B. Estimated Costs

A summary of the estimated costs for the proposed action is presented below. A detailed cost estimate is included as Appendix D.

	Previous Project Costs	Proposed Project Costs	Total Project Ceiling (Rounded)
EXTRAMURAL COSTS			
ERCS	$30,000	$272,000	$302,000
TAT	15,000	31,000	46,000
Contingency (20%)	n/a	61,000	61,000
TOTAL EXTRAMURAL	45,000	364,000	409,000
INTRAMURAL COSTS	5,000	78,000	83,000
TOTALS	**$50,000**	**$442,000**	**$492,000**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

The actions proposed in this Action Memorandum will mitigate the immediate threat to on-site and local residents. Should no action be taken or the planned action be delayed, the on-site residents will continue to be exposed to hazardous substances present at the Site. In addition, surface water runoff and anthropogenic redistribution will further contribute to the contamination of neighboring areas.

VII. OUTSTANDING POLICY ISSUE

None.

VIII. ENFORCEMENT

Site-related enforcement activities were initially limited due to time constraints resulting from the time-critical determination for the removal action.

In October 1994, EPA TAT conducted a title and deed search of the property. Property owner information was obtained from 1894 to the present and is being kept on file.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Pyridium Mercury Disposal Site No. 2 in the Village of Harriman, Orange County, New York, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision is based on the administrative record for the Site. Site conditions continue to meet the NCP Section 300.415(b)(2) criteria for a removal, and I recommend your approval of the proposed ceiling increase of $442,000, of which $272,000 will be funded from the Regional removal allowance. The total project ceiling, if approved, will be $492,000.

Please indicate your approval and authorization of funding, as per current Delegation of Authority, by signing below.

APPROVAL: _____ **DATE:** 9/29/95
Jeanne M. Fox
Regional Administrator

DISAPPROVAL: _____ **DATE:** _____
Jeanne M. Fox
Regional Administrator

cc: (after approval is obtained)
W. Muszynski, DRA
K. Callahan, ERRD-D
R. Salkie, ERRD-ADREPP
W. McCabe, ERRD-DDNYC/P
G. Zachos, ERRD-RAB
J. Rotola, ERRD-RAB
M. Randol, EPD
E. Schaaf, ORC-NYCSUP
V. Capon, ORC-NYCSUP
R. Gherardi, OPM-FIN
S. Murphy, OPM-FIN
D. Dietrich, 5202G
J. Hilton, 5202G
M. O'Toole, NYSDEC
T. Vickerson, NYSDEC
C. Kelly, TATL

APPENDIX A

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Center for Environmental Health 2 University Place Albany, New York 12203-3399

Mark R. Chassin, M.D., M.P.P., F.A.C.P.
Commissioner
Paula Wilson
Executive Deputy Commissioner

OFFICE OF PUBLIC HEALTH
Lloyd F. Novick, M.D., M.P.H.
Director
Diana Jones Ritter
Executive Deputy Director
William N. Stasiuk, P.E., Ph.D.
Center Director

November 30, 1994

Ms. Kathleen C. Callahan, Director
Emergency & Remedial Response Division
United States Environmental
Protection Agency
Region II
26 Federal Plaza
New York, New York 10278

RE: Mitigating Potential Exposures
~~Pyridium~~ Mercury Site #~~2~~
NYSDOH Site #336822N
(V)Harriman, Orange County

Dear Ms Callahan:

On October 21, 1994, my staff investigated a report of a possible second Pyridium Mercury Disposal site at 40 South Main Street in the Village of Harriman, Orange County. A mother and her two children, ages 6 and 7, are the only current residents. Allegedly, eight to fifteen truckloads of the Pyridium wastes were used as fill in the front yard of a single family residence during the early 1950's. Shoveled test holes were dug with the assistance of the property owner and the Village of Harriman Code Enforcement Officer. A Nepera, Inc. official was present during this preliminary inspection. Whitish gray Pyridium-like wastes were discovered a few inches below the ground surface at several locations in the front yard of this late 1800's home. Surface wastes were observed only where a large willow tree root broke through the grass cover. This spot was immediately covered over by investigators to minimize casual contact.

At our request, the United States Environmental Protection Agency (EPA) collected one surface soil, two subsurface soil, and two subsurface waste samples on October 26, 1994. The results of the testing demonstrated that there are significantly elevated levels of mercury in the subsurface wastes (two samples: 227 and 456 parts per million (ppm) of total mercury). The surface soil sample collected within the fenced yard, where the two children and family dog spend much of their play time, contained 27.5 ppm of total mercury. Because mercury is typically found in soils at levels less than 1 ppm, we and a representative of the federal Agency for Toxic Substances and Disease Registry recommended confirmatory surface soil sampling within the play yard. On October 29, 1994 the EPA collected nine additional surface soil (0 to 3 inches below any vegetative cover) samples to further assess the extent of surface contamination so that appropriate public health decisions could be made. Total mercury levels ranged from 0.1 to 117 ppm with an average of 35.1 ppm. Mercury contamination appears to increase markedly from the front porch outward

toward the reported area of historic waste disposal. Based on field observations, less obvious mercury contamination detected in surface soils within the fenced play area may be the direct result of the family's pet repeatedly digging in the yard.

Exposure to either inorganic or organic mercury can permanently damage the brain, kidneys, and developing fetus. The most sensitive target of low-level exposure to inorganic mercury appears to be the kidneys. Exposure to mercury in the soil can occur through a number of routes. There is the potential for direct oral exposure via ingestion of soil, dust, and garden produce grown in contaminates soil. Mercury can be absorbed into the body via dermal contact through activities associated with soil disturbances such as gardening, yard work, and play. The potential for inhalation of mercury particulates and mercury vapor is also a concern.

The elevated levels of mercury in soil are a public health concern. To minimize potential human exposure to these chemical wastes, the tenant and the property owner have been advised to avoid physical contact with front yard soils and to avoid disturbing any soils whatsoever. Based on the results of the EPA's follow-up sampling, the mother has been advised to keep her children and dog out of the fenced play area. Vegetable gardening is not recommended. These temporary advisories should be followed by a permanent solution as the presence of these wastes on a residential property pose a current and future threat to public health.

With this information, I am seeking the EPA's assistance in reducing or eliminating the conditions causing this potential human health hazard in the Village of Harriman. I am further asking that the EPA either enter into an Order on Consent with Nepera, Inc. or else respond to this situation using federal Superfund monies to assure that the presence of this hazardous substance within a residential neighborhood is satisfactorily addressed to eliminate the exposure potential. It is important to note that as a result of public meetings and media attention associated with the first Pyridium Mercury Disposal (trailer park) site which is just up the road, the community has a heightened desire for a thorough investigation and clean-up of this property as well as any others that may be discovered with similar wastes in the future.

We look forward to working with the EPA toward a satisfactory resolution of this sensitive public health issue. Should you wish to discuss the matter further, do not hesitate to contact me at (518) 458-6310.

Sincerely,

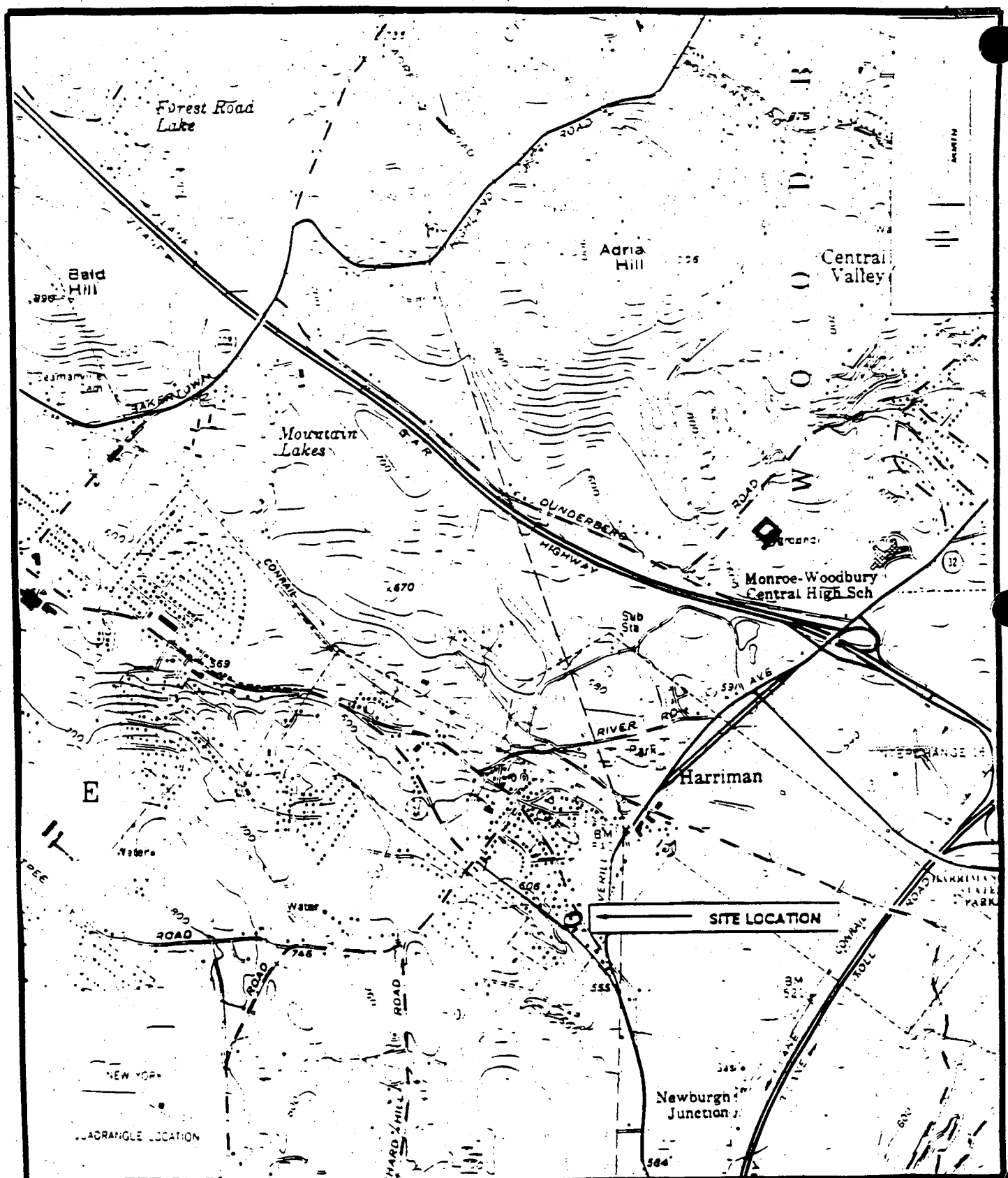
G. Anders Carlson

G. Anders Carlson, Ph.D.
Director
Bureau of Environmental Exposure
Investigation

sms/94300PRO0671

cc: Dr. N. Kim
Mr. S. Bates/Mr. M. Valkenburg
Mr. J. Crua
Mr. M. Knudsen
Ms. N. Knapp
Mr. S. Abrams
Mr. M. Schleifer - OCHD
Mr. M. O'Toole - DEC
Mr. S. Ervolina/ Ms. S. McCormick - DEC
Mr. A. Klauss - DEC Region 3
Mr. G. Zachos/Mr. J. Rotola - EPA Region II
Mr. A. Block/Mr. S. Jones - ATSDR
Mr. D. Humphrey - Mayor of Harriman

APPENDIX B



Roy F. Weston, Inc. MAJOR PROGRAMS DIVISION	EPA PM D. HARKAY	FIGURE 1 SITE LOCATION MAP
IN ASSOCIATION WITH FOSTER WHEELER CORP., C.C JOHNSON & MALHOTRA, P.C., RESOURCE APPLICATIONS, INC. AND R.E. SARRIERA ASSOCIATES	TAT PM S. MAY	PYRIDIUM MERCURY DISPOSAL SITE NO. 2

HEALTH CONSULTATION

PYRIDIUM MERCURY DISPOSAL SITE #2
HARRIMAN, ORANGE COUNTY, NEW YORK
CERCLIS NO. NY000162850

August 28, 1995

Prepared by:

New York State Department of Health
Under a Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

BACKGROUND AND STATEMENT OF ISSUE

The New York State Department of Health (NYS DOH) through a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR) has reviewed information and analytical data from the Pyridium Mercury Disposal Site #2 to determine if there is a public health threat associated with exposure to mercury. The Pyridium Mercury Disposal Site #2 (Figure 1) is located on a residential lot along South Main Street in the Village of Harriman, Town of Monroe, Orange County, near the intersection of Routes 17M (Ramapo Avenue) and South Main Street. Site #2 is within one-quarter mile of Pyridium Site #1, the trailer park (Figure 2). The area of concern (Figure 3), which is about one-quarter acre in size, includes an old farmhouse built in the late 1800's that pre-dates the waste disposal activities. This property is bounded to the northwest by an overgrown lot, to the southwest by a gasoline service station, to the southeast by Ramapo Lane and to the northeast by South Main Street. The two-story house has been occupied for approximately three years by a mother with two children, ages six (son) and seven (daughter). Five days each week, three hours each day, a home health aide visits the family. Access to the basement, used only for storage, is from the outside. The stone-walled basement has a concrete floor and is primarily dry throughout the year. According to a local resident, eight to fifteen truckloads of waste materials, a mercuric or mercurous salt generated during the production of niacinamide (vitamin B-3) by the former Pyridium Corporation, were observed to have been dumped during the early 1950's in an "L" shape, down and across the front yard.

On October 21, 1994, the NYS DOH assisted the Village of Harriman Code Enforcement Officer in investigating a report of a possible second disposal site. Test holes were dug with the assistance of the property owner and the Code Enforcement Officer. A Nepera, Inc., official was present during this preliminary investigation. Whitish-gray, Pyridium-like wastes were discovered a few inches below the ground surface at several locations in the front yard. Surface wastes were observed only where a large tree root broke through the grass cover.

On October 26, 1994, at the request of the NYS DOH, the United States Environmental Protection Agency (US EPA) collected one surface soil sample (0-1 inch below ground surface), two subsurface soil samples (0-3 inches below ground surface) and two subsurface waste samples (3-6 inches and 1-6 inches below ground surface). The two subsurface waste samples had significantly elevated levels of mercury (227 and 456 milligrams of total mercury per kilogram of soil [mg/kg]). The surface soil sample collected within the fenced yard, where the two children and family dog spend much of their play time, contained 27.5 mg/kg of total mercury. Mercury is typically found in soils at levels less than 1 mg/kg.

from eating contaminated breast milk if the mother was exposed to mercury.

Long-term exposure to sufficiently high levels of mercury can damage the kidneys, nervous system and developing fetus (baby). The most sensitive target organ for low-level inorganic mercury exposure appears to be the kidneys.

Health risk comparison values are used to assess if further evaluation of the soil is needed. Several factors are considered in the evaluation including soil ingestion rate, the size and age of the exposed individual, length of exposure and the health effects data. A health comparison value for mercury in soil is the mercury concentration in soil which would provide, by ingestion, a dose of mercury equal to the daily exposure below which adverse health effects are unlikely to occur. A contaminant at concentrations exceeding a health comparison value does not necessarily mean that either exposure to the contaminant or adverse health effects have occurred or will occur.

Health comparison values are developed assuming worst case exposure, i.e., the greatest exposure possible. Using soil ingestion rates for children with pica overestimates soil ingestion rates for the general public, including most children.

Soil mercury concentrations identified at the site range from 0.1 to 456 mg/kg. Table 1 (Appendix B) contains soil health comparison values for inorganic mercury. The soil mercury concentrations at the site exceed some of the health comparison values. Therefore, the soil concentrations of mercury at the Pyridium Mercury Waste Disposal Site #2 warrant further characterization and evaluation of exposure pathways and the potential for adverse health effects in individuals who may have been exposed to the waste materials.

A child with pica is likely to have the highest exposure and, based on the highest soil mercury concentration (456 ppm), is at high risk of having adverse kidney effects. Children without pica and adults are at minimal risk of having adverse kidney effects. Fruits and vegetables grown in contaminated soil are an additional potential source of exposure. Mercury levels are higher in plants grown in contaminated soil than in those grown in soil which is not contaminated. Eating such plants could contribute additional mercury to the diet.

The soil mercury concentrations at the site provide a source for exposure which could produce health effects in individuals whose activities lead to greater contact with the waste material.

On June 9, 1995, the NYS DOH sent copies of this health consultation to interested parties requesting concerns and comments

5. During future site clean-up involving excavation, site residents should be temporarily relocated or precautionary measures taken to minimize potential exposures or personal injuries.

HEALTH ACTIVITIES RECOMMENDATION PANEL (HARP) RECOMMENDATIONS

The data and information developed in the Health Consultation for the Pyridium Mercury Disposal Site #2, Harriman, New York, has been reviewed by ATSDR's Health Activities Recommendation Panel (HARP) to determine appropriate follow-up health actions. Because of past and possible current exposure to mercury-contaminated residential soils, the panel recommended this site for follow-up health activities. Specifically, those persons exposed should be medically evaluated for the presence of mercury. In addition, the HARP also determined that community health and health professions education are indicated. The NYS DOH has and will continue to conduct site-specific education activities at the site.

PUBLIC HEALTH ACTIONS

Public Health Actions Taken

1. The NYS DOH held a public availability session on November 28, 1994, to provide information to the community about the site and address health-related concerns.

2. A NYS DOH physician talked with the adult resident (mother) about health concerns related to the site.

3. Urine sampling was offered; whether or not this offer was accepted and any results which might have been obtained are confidential under New York State law.

4. In response to a recommendation by the NYS DOH, the US EPA blocked off the fenced, front yard play area to prevent the family dog from potentially digging up contaminated soils. The US EPA also erected a new fenced-in play area in the back yard where no soil contamination was detected.

Public Health Actions Planned

1. If authorized, waste removal may occur in summer or fall of 1995. The three residents and dog may be temporarily relocated by the US EPA should excavation of contaminated soil occur.

2. The NYS DOH will review all site-related investigation reports and health-related information and, if necessary, hold

REFERENCES

Agency for Toxic Substances and Disease Registry (ATSDR). 1992. Case Studies in Environmental Medicine, Mercury Toxicity. Atlanta, GA. U.S. Department of Health and Human Services.

Agency for Toxic Substances and Disease Registry (ATSDR). 1993. Toxicological Profile for Mercury. Atlanta, GA. U.S. Department of Health and Human Services.

Agency for Toxic Substances and Disease Registry (ATSDR). 1994. Health Consultation, Pyridium Mercury Disposal Site, Harriman, NY. Atlanta, GA. U.S. Department of Health and Human Services.

Agency for Toxic Substances and Disease Registry (ATSDR). March 1992. Public Health Assessment Guidance Manual. U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry, Atlanta, Georgia.

Conestoga-Rovers and Associates (CRA). 1992. Remedial Investigation Plant Site (Nepera, Inc.), Harriman, NY. Waterloo, Ontario, Canada.

U.S. Environmental Protection Agency (US EPA). 1994. Sampling Report, Pyridium Mercury Disposal Site #2, Harriman, NY. Edison, NJ.

World Health Organization (WHO). 1990. Environmental Health Criteria 101. Geneva, Switzerland. World Health Organization Distribution and Sales Service. International Programme on Chemical Safety.

CERTIFICATION

The Health Consultation for the Pyridium Mercury Disposal Site #2 was prepared by the New York State Department of Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was initiated.

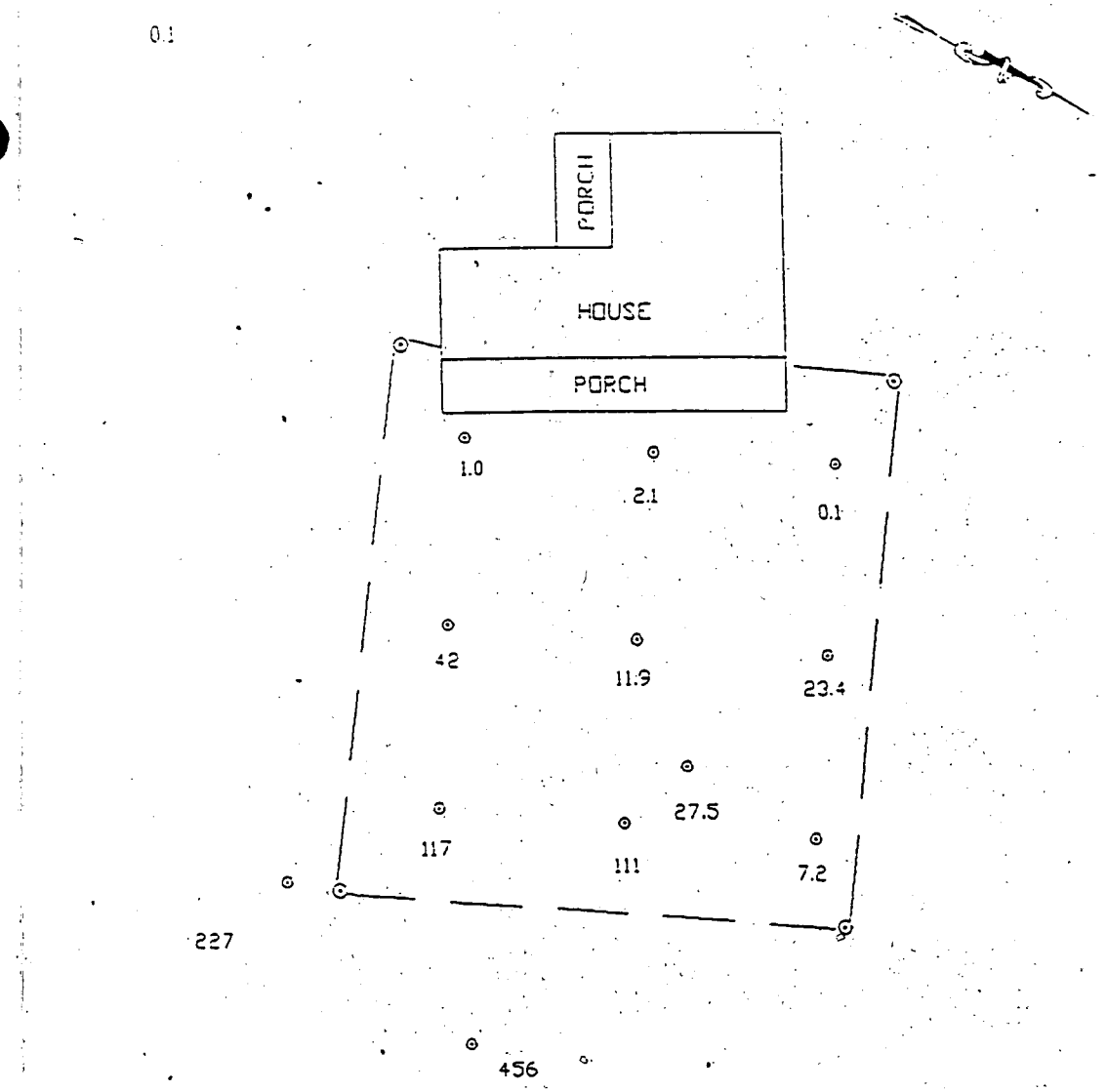
Gregory V. Ulirsch

Gregory V. Ulirsch, M.S.
Technical Project Officer
Superfund Site Assessment Branch (SSAB)
Division of Health Assessment and Consultation (DHAC)
ATSDR

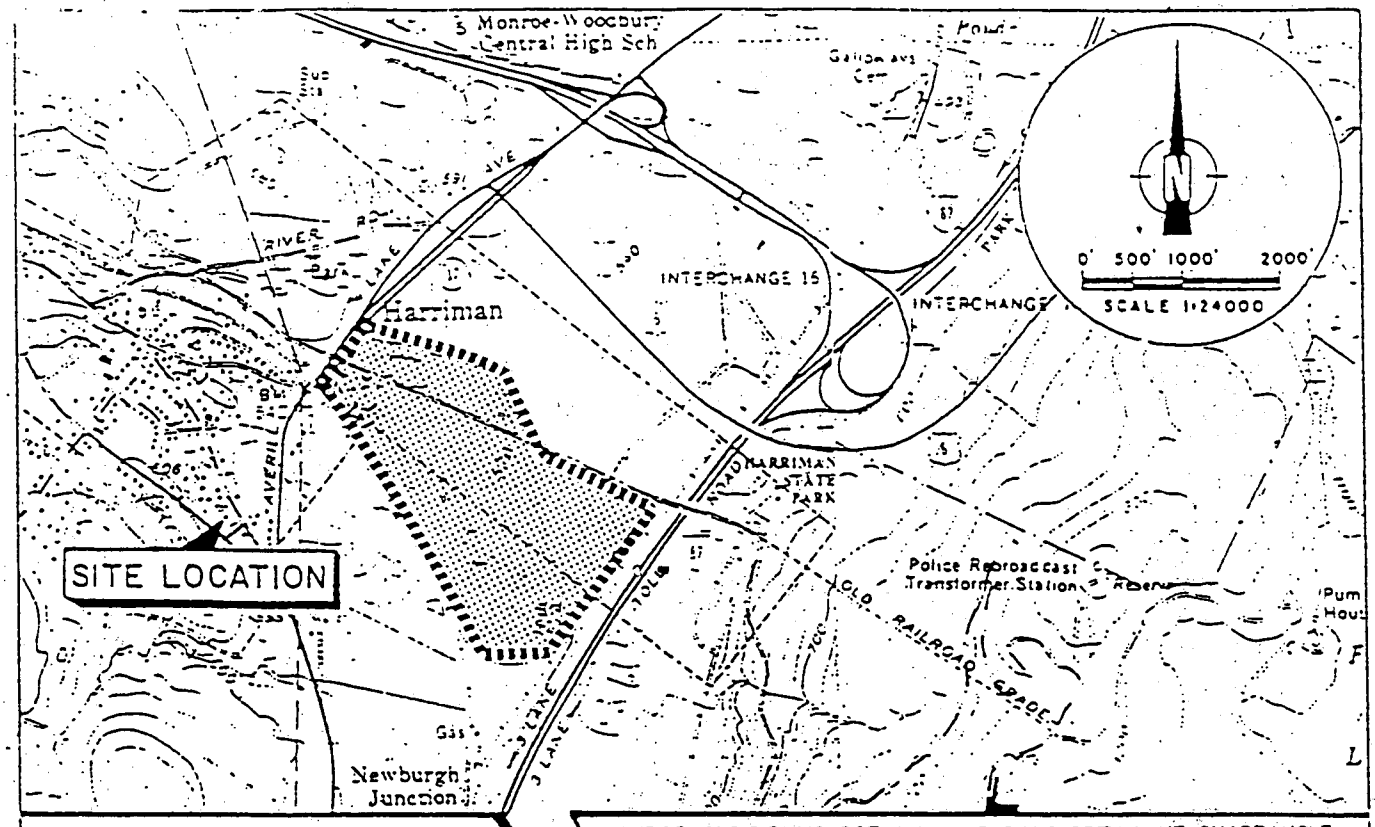
The Division of Health Assessment and Consultation, ATSDR, has reviewed this health consultation, and concurs with its findings.

Richard Gillig

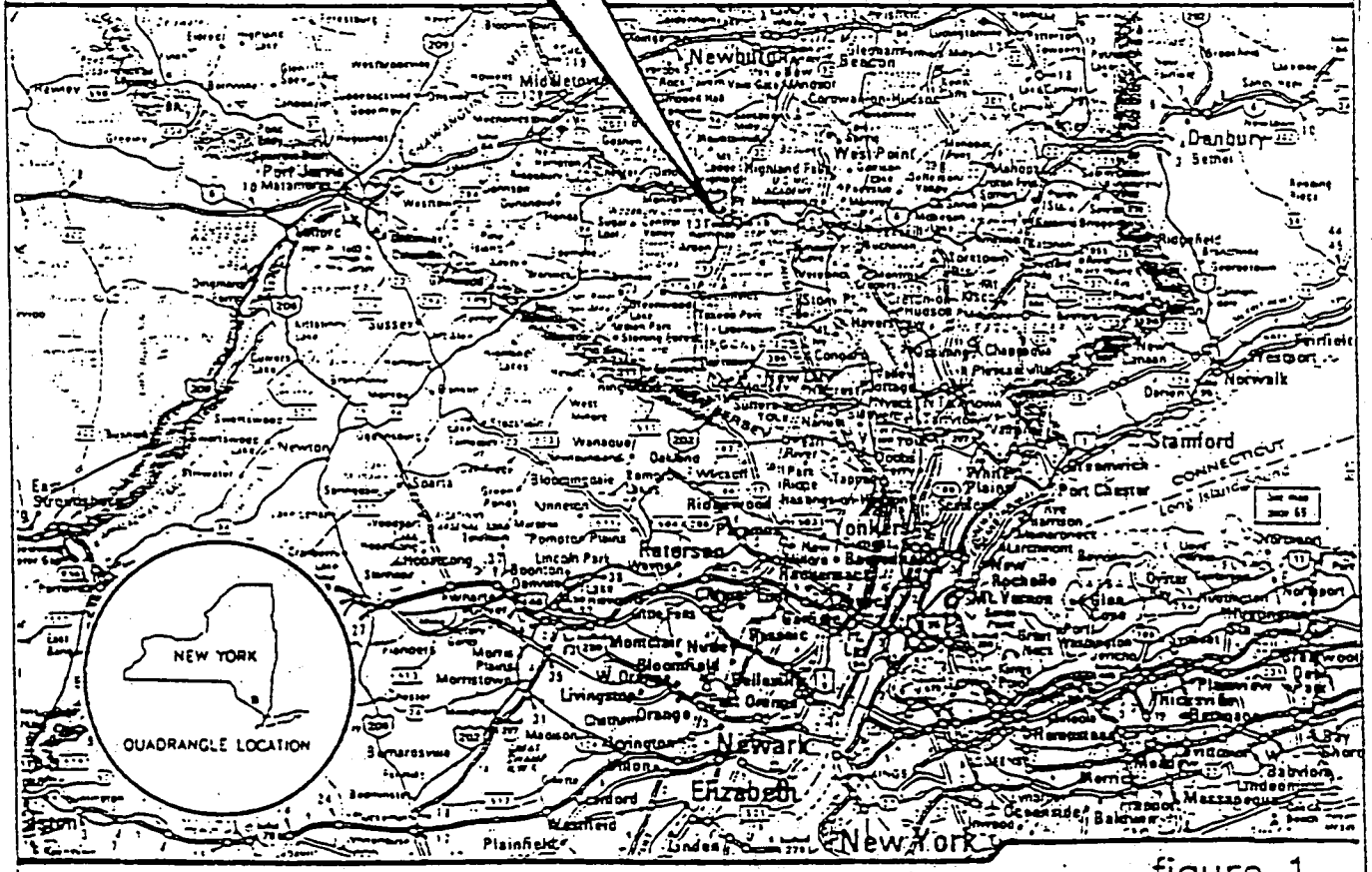
for Sharon Williams-Fleetwood, Ph.D.
Chief, SSAB, DHAC, ATSDR



LEGEND Sample Location Fence Corner Post Telephone Pole 227 Mercury concentration (ng/kg) Fence Line Scale 1" = 20'	FIGURE 3- MERCURY CONCENTRATION MAP PYRIDIUM MERCURY DISPOSAL SITE NO. 2 HARRIMAN, NEW YORK OCTOBER 26 - 29, 1994



SOURCE: U.S.G.S. MONROE, N.Y. AND POPOLOPEN LAKE QUADRANGLE
41074 – C2 – TF–024 AND N4115 – W 7400 / 7.5



SOURCE: RAND McNALLY ROAD ATLAS

figure 1

SITE LOCATION
HARRIMAN, NEW YORK

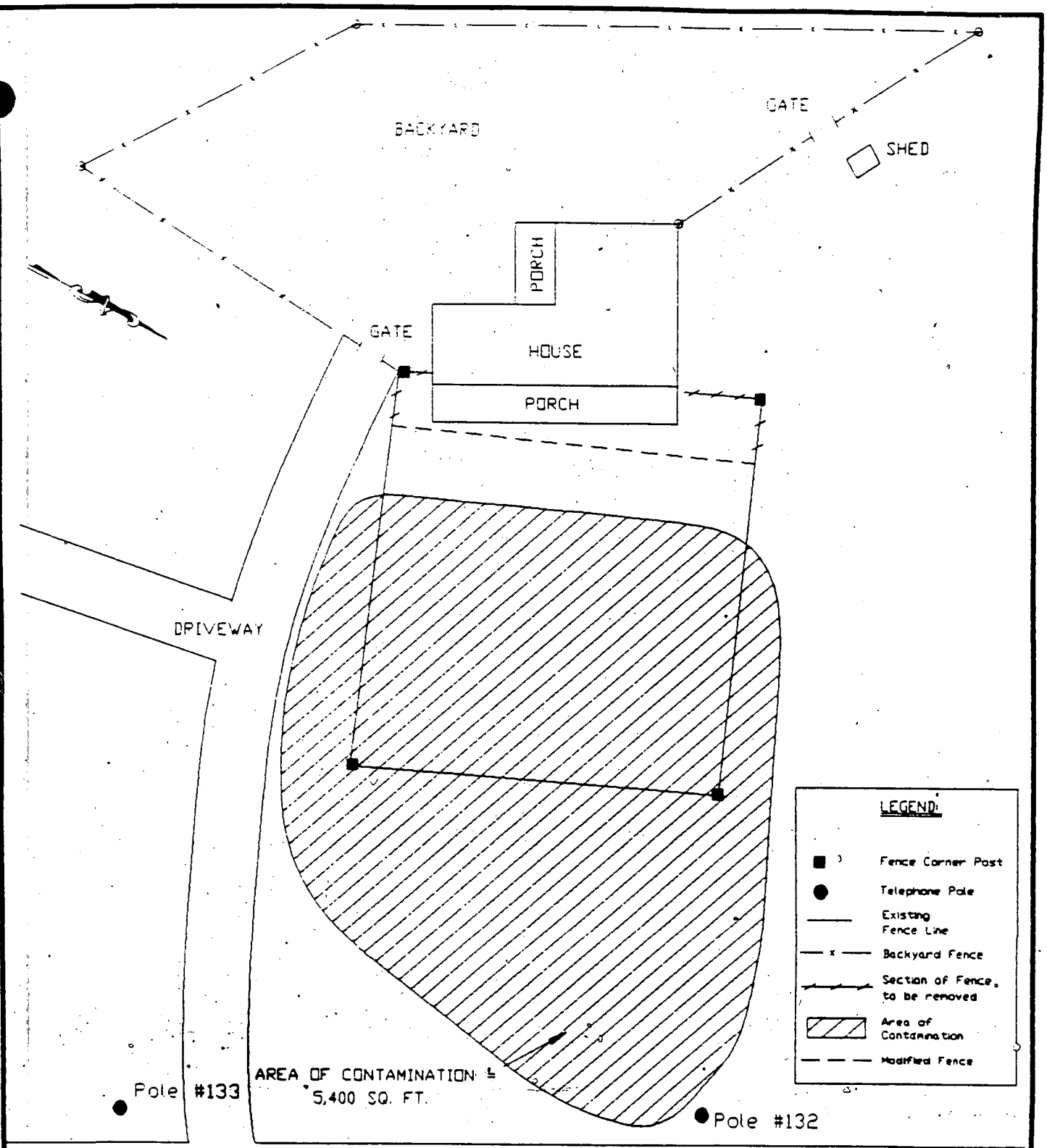


FIGURE 2 - SITE MAP

PYRIDIUM MERCURY DISPOSAL SITE NO. 2

HARRIMAN, NEW YORK

DRAWING NOT SCALE.

APPENDIX C

ATSDR

Public Health Assessment Guidance Manual

March 1992

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Atlanta, Georgia 30333

Table 1. SOIL COMPARISON VALUES FOR RESIDENTIAL EXPOSURE TO INORGANIC MERCURY

	COMPARISON VALUE				
	Ingestion of Soil			Soil and Homegrown Produce***	
Duration of Exposure:	Pica Child[1]	Child[2]	Adult[3]	Child[2]	Adult[3]
Short-term*	14 ppm	--	9800 ppm		
Long-term**	0.6 ppm	47 ppm	420 ppm	1.6 ppm	4.9 ppm

[1]Assumes child with pica weighs 10 kg and ingests 5000 milligrams (mg) of soil per day.

[2]Assumes a 13.2 kg child, and a time-weighted-average soil ingestion of 85.2 mg soil per day to account for weekly and seasonal variability when estimating chronic exposures.

[3]Assumes an adult weighs 70 kg and ingests 50 mg of soil per day.

*ATSDR has established short-term level for inorganic mercury of 0.007 milligram per kilogram per day (mg/kg/day). It is a level of short-term exposure to inorganic mercury below which adverse health effects are unlikely to occur.

**US EPA has established a long-term level for inorganic mercury of 0.0003 mg/kg/day. It is a level of long-term exposure to inorganic mercury below which adverse health effects are unlikely to occur.

***Assumes 40% consumption of homegrown fruits and vegetables.

Table 8.1. Continued

CATEGORY E
NO PUBLIC HEALTH HAZARD

This category is used for sites that do not pose a public health hazard.

Criteria:

There is no evidence of current or past human exposure to contaminated media;

and

future exposures to contaminated media are not likely to occur;

and

there are no community-specific health outcome data to indicate that the site has had an adverse impact on human health.

ATSDR Actions:

No public health actions are recommended at this time because no human exposure is occurring, has occurred in the past, or is likely to occur in the future that may be of public health concern.

Table 8.1. Continued

CATEGORY A URGENT PUBLIC HEALTH HAZARD (continued)	CATEGORY B PUBLIC HEALTH HAZARD (continued)
• community health investigation; • registries; • site-specific surveillance; • voluntary residents tracking system; • cluster investigation; • health statistics review; • health professional education; • community health education; and/or • substance-specific applied research.	• registries; • site-specific surveillance; • voluntary residents tracking system; • cluster investigation; • health statistics review; • health professional education; • community health education; and/or • substance-specific applied research.

Pyridium Mercury Disposal Site #2
Response to Public Comment

This response to public comment was prepared to answer the public's comments on the Pyridium Mercury Disposal Site #2 Health Consultation. The public was invited to comment during the public comment period which ran from June 9, 1995 to July 13, 1995. One reply form was received by the New York State Department of Health. The following is a summary of our response to the comment received. If you have any questions, contact the Health Liaison Program at the toll-free number 1-800-458-1158, extension 402.

Comment

A previous resident of the area was concerned about potential past exposures and possible follow-up testing.

Response

New York State Department of Health medical staff from the Bureau of Environmental and Occupational Epidemiology responded by telephone and a follow-up letter. Responses to medical questions are considered confidential information; therefore, we are not able to provide details of the conversation or follow-up letter.

START-02-F-00203

COMMUNITY RELATIONS PLAN

PYRIDIUM MERCURY DISPOSAL SITES NO. 1 & 2

VILLAGE OF HARRIMAN

ORANGE COUNTY, NEW YORK

Prepared by:

Region II Superfund Technical Assessment and Response Team
Roy F. Weston, Inc.
Major Programs Division
Edison, NJ 08837

Prepared for:

United States Environmental Protection Agency
Region II, Removal Action Branch
Edison, New Jersey 08837

December 1995

I. BACKGROUND

A. Site Descriptions and Background

Pyridium 1

The Pyridium Mercury Disposal Site No. 1 (Pyridium 1) is located in a mixed residential/commercial area at the intersection of Route 17M and Harriman Heights Road in the Village of Harriman, Orange County, New York. The property encompasses 1.93 acres and is bordered on the northwest by an auto transmission shop; on the northeast by Route 17M; on the southeast by wetlands; and on the southwest by a residential lawn. The property is currently being used as a trailer park; approximately 16 people reside in five mobile homes on site. An elementary school is located approximately 1,000 feet north of the site. The site itself occupies approximately one acre of the property.

The United States Environmental Protection Agency (US EPA) was notified of the existence of the site by the New York State Department of Health (NYSDOH) on September 29, 1994.

A white, clay-like substance was discovered at the site during a separate investigation at the adjacent transmission shop. The New York State Department of Environmental Conservation (NYSDEC) and NYSDOH collected samples of the waste material. Analytical results of the samples indicate elevated concentrations of mercury (max. 653 milligram per kilogram [mg/kg]); mercury is typically found in soils at levels of less than one mg/kg. On-site contamination is suspected to result from the use of mercury-contaminated industrial waste as fill in low-lying areas of the property. The waste was reportedly generated during the 1940s by the Pyridium Corporation of Harriman. Nepera, Inc. currently owns and operates the facility.

Pyridium 2

The Pyridium Mercury Disposal Site No. 2 (Pyridium 2) is a residential property located at 40 South Main Street, Village of Harriman, Orange County, New York. EPA was notified by the Village of Harriman and the NYSDOH that material similar to that found at Pyridium 1 was also present at this site. Waste samples collected by EPA and the Technical Assistance Team (TAT) on 26 October 1994 were found to contain mercury at concentrations up to 477 mg/kg. Waste at the site is similar physically and chemically to waste found at the Pyridium 1 site.

B. National Priorities List (NPL) Designation

The Pyridium Sites 1 and 2 are not listed on the NPL.

II. THREAT

A. Threat of Public Exposure

Pyridium 1

The site is unsecured and poses a health threat to on-site residents, local residents and animals that could come in direct contact with the hazardous substances at the site. High concentrations of the hazardous substance on the ground surface could migrate and contaminate a larger area.

Data indicate that a potential exists for contaminant migration via overland drainage routes. Low level mercury contamination was documented in a wetland area located east of the waste disposal area. No visible waste was observed at the sampling location, indicating that contaminants have migrated from the waste disposal area to adjacent wetlands. The results of a sediment sample collected at the outfall of a drainage culvert, located northeast of the site, across Route 17M, indicate the presence of mercury (0.643 mg/kg). Therefore, the possibility of contaminant migration from the site via this overland drainage route to adjacent off-site areas exists.

Pyridium 2

Contaminants located at the surface may pose a threat to the health of on-site residents, local residents and animals that could come into contact with the hazardous substance located at the site. The results of analysis of soil and waste samples collected by the EPA and TAT on 26 and 29 October 1994, have been forwarded to the NYSDOH and the Agency for Toxic Substances and Disease Registry (ATSDR). A Health Consultation was finalized on 28 August 1995.

B. Extent of Contamination

Pyridium 1

The area of contamination was determined to encompass approximately 24,000 square feet. The volume of waste and contaminated soil is estimated at 3,600 cubic yards.

Pyridium 2

The area of contamination was determined to encompass approximately 5,900 square feet. The volume of waste and contaminated soil is estimated at 500 cubic yards.

C. Previous Actions to Abate Threat

Pyridium 1

The residents in the trailer park were permanently relocated with funding provided by Nepera and a fence was installed at the site to reduce the potential contact with the contaminated soil.

Pyridium 2

The existing fence in the front of the property was extended to enclose the area of contamination. Additionally, a fence was installed in a clean area to allow the children and family dog to play. The inside of the house was wiped down to reduce the dust contaminants brought into the house by the dog or the residents shoes.

D. Current Actions to Abate Threat

Pyridium 1

Two public meeting and one public availability sessions have been held to provide information to the community about the site and to address public health concerns. NYSDOH and ATSDR have advised residents to avoid contact with mercury contaminated waste and soils.

The NYSDOH collected and analyzed urine samples from the 14 people previously living on site; the mercury urine levels were within the normal range, below 20 micrograms per liter. All of the individuals tested were provided with a copy of the urine analysis. Additionally, the site residents' physicians were provided with educational materials regarding the toxic effects of exposure to mercury. The NYSDOH physicians have spoken with several members of the community about health concerns related to the site.

Nepera Inc., Harriman, signed an Administrative Order on Consent with EPA agreeing to fund relocation of the residents of the trailer homes. To date, Nepera has distributed relocation settlements to the eligible residents.

Pyridium 2

The NYSDOH has advised that the on-site residents limit the use of contaminated portions of the property. The analytical results from sampling conducted by EPA have been forwarded to the NYSDOH and ATSDR for evaluation. A fence was installed to reduce the spread of contamination via tracking. The Health Consultation was finalized on 28 August 1995.

III. PROPOSED PROJECT

A. Project Objectives

Pyridium 1

The purpose of the proposed action will be to excavate contaminated soil and restore with clean fill.

Pyridium 2

The course of action for this site is to eliminate the threat of exposure to the mercury contaminated soil by excavating the soil and backfilling the excavation with clean fill.

B. Project Tasks

Pyridium 1

A future course of action for Pyridium 1 has not been determined.

Pyridium 2

The scope of work for the proposed removal action includes:

- temporary relocation of the residents;
- removal of the large tree in the center of the yard;
- excavation of contaminated soil;
- collection of post excavation soil samples (to ensure all the contamination has been removed);
- backfill of the excavated area; and
- restoration of the property.

C. Objectives of the Community Relations Plan

- Provide accurate and concise information to interested citizens, officials and media;
- Coordinate local, state and federal response teams; and
- Enlist the assistance of local officials as needed.

The groups to whom the plan is directed are: citizens, citizen groups, local businesses, officials, and local, state, and federal agencies working in conjunction with Region II EPA.

Community relations information will be provided by EPA's Office of External Programs (OEP) with the knowledge of the Office of the Regional Administrator.

D. Community Relations Activities

Date (s)	Activities	Objectives	Staff
As needed	Meetings with state state, county and local officials	To develop local contingency plans	OSC OEP Rep.
As needed	Press release	To brief the community and press on site status	OSC OEP Rep.
As needed	Fact sheets	To provide the public with removal activity information	OSC OEP Rep.
As needed	Briefings	To inform state and local officials about ongoing developments at the site	OSC OEP Rep.
As needed	Public Meetings	To discuss the need for response review key decision points, explain cleanup methods and respond to the public's concerns	OSC OEP Rep.

E. Key Officials and Contacts

Federal Agencies

Irmee Huhn/Dan Harkay
On-Scene Coordinators
United States Environmental Protection Agency
Region II, Removal Action Branch
2890 Woodbridge Avenue, MS-211
Edison, NJ 08837
(908) 906-6813/(908) 321-6614

Federal Elected Officials

U.S. Senator Daniel P. Moynihan
214 Main Street
Oneonta, NY 13820
(607) 433-2310

U.S. Senator Alfonse D'Amato
420 Leo O'Brien Federal Bldg.
Albany, NY 12207
(212) 947-7390

U.S. Congressman Benjamin A. Gilman
407 E. Main Street
Middletown, NY 10940
(914) 343-6666

State Elected Officials

Senator William J. Larkin, Jr.
649 Little Britain Road
New Windsor, NY 12553
(914) 567-1270

Senator Joseph Holland
150 Airport Executive Park
Spring Valley, NY 10977
(914) 425-1818

Assemblywoman Nancy Calhoun
2011 D. Street
Stewart International Airport
New Windsor, NY 12553
(914) 564-1330

State Agencies

New York State Department of
Environmental Conservation
50 Wolf Road
Albany, NY 12233
(518) 457-5861

NYSDEC Region 3 Office
21 South Putt Corners Road
New Paltz, NY 12561
(914) 255-5453

Assemblyman John J. Bonacic
660 E. Main Street, Suite 2D
Middletown, NY 10940
(914) 343-7010

Assemblyman Jake Gunther
89 North Street
Middletown, NY 10940
(914) 342-9304

Local/County Officials

Village of Harriman
1 Church Street
Harriman, NY 10926
(914) 783-4421
Mayor John Iccarino

County of Orange, NY
Government Center
255-275 Main Street
Goshen, NY 10924
(914) 294-5151
County Exec. Joseph G Rampe
Administrative Officer
Christopher J. Denleavy

Orange County Health Department
Dr. Sally Dorfman, Commissioner
124 Main Street
Goshen, NY 10924
(914) 294-7691

Media

Daily Newspapers

The Times Herald
40 Mulberry Street
Middletown, NY 10940-6302
(914) 343-2181

The Record
150 River Street
Hackensack, NJ 07601

Radio

WBNR
111 Broadway
Newburgh, NY 12550
(914) 562-1260

WGNY
429 Little Britain Road
New Windsor, NY 12553
(914) 561-9469

WHVW Hudson Valley Country
507 Violet Avenue
Hyde Park, NY 12538
(914) 454-9592

Television

WTZA-TV
721 Broadway
Kingston, NY
(800) 724-6200

Weekly Newspaper

The Photo News
45 Gilbert Street
Monroe, NY 10950-0816
(914) 782-4000

Orange County Post
15 Goshen Avenue
Washingtonville, NY 10992
(914) 496-3611

F. Suggested Locations for Information Repositories and Public Meetings

Information Repository

Marilyn McIntosh, Library Director
Monroe Free Library
Mill Pond Parkway
Monroe, NY 10950
(914) 783-4411

USEPA Removal Record Center
2890 Woodbridge Ave
Edison, NJ 08837
(908) 906-6980

Public Meetings

Location to be determined

NOTICE OF PUBLIC AVAILABILITY

The United States Environmental Protection Agency Announces
The Availability of the Administrative Record for
the Pyridium Mercury Disposal Site # 2

The U.S. Environmental Protection Agency (EPA) announces the availability for public review of files comprising the administrative record for the selection of the removal action at the Pyridium Mercury Disposal Site # 2. The EPA seeks to inform the public of the availability of the record file at this repository and to encourage the public to comment on documents as they are placed in the record file.

The administrative record file includes documents which form the basis for the selection of a removal action at this site. Documents now in the record file include: Sampling Analytical Data Report and the EPA regional guidance documents list. Other documents may be added to the record files as site work progresses. These additional documents may include, but are not limited to, other technical reports, validated sampling data, comments, and new data submitted by interested persons, and the EPA responses to significant comments.

The administrative record files are available for review during normal business hours at:

Monroe Free Public Library
Mill Pond Parkway
Monroe, NY 10950
Attention: Marilyn McIntosh
(914) 783-4411

U.S. EPA Region II
Removal Action Branch
2890 Woodbridge Avenue
Bldg 209
Edison, N.J.
(908) 906-6813

Additional information is available at the following location:

Guidance documents and
technical literature

U.S. EPA - Region II
Removal Records Center
2890 Woodbridge Avenue
Bldg 205
Edison, N.J.
Phone (908) 906-6980

Written comments on the Administrative Record should be sent to:

Irmee Huhn, On-Scene Coordinator
Removal Action Branch
U.S. EPA - Region II
2890 Woodbridge Ave.
Edison, NJ 08837

the region

A poison sewn into the soil

Mercury compound found in trailer park

By CHRISTOPHER MELE
Staff Writer

— Dawn McManus isn't sure what to think.

From 1976-79, she lived in one of five trailers set on a parcel off Route 17M in the Village of Harriman.

While she lived there, McManus had two miscarriages. After she moved, she had four children, three of whom have learning disabilities.

Fifteen years after McManus moved, health officials discovered that a mercury compound had been dumped nearly 50 years ago at the trailer site. Exposure to mercury can permanently damage the brain, kidneys and a developing fetus.

Tests show readings as high as 653 times the normal concentration for mercury in soil, according to state health officials.

The milky white material that infests the soil in front, back and underneath the trailers is driving residents from their homes.

Now, state and federal officials, with the cooperation of Nepera Inc., a Harriman chemical corporation, are arranging to relocate the 16 residents as rapidly as possible.

McManus no longer lives at the site, but the mercury discovery raises nagging questions.

"I think maybe the miscarriages could have been because of the water I was drinking or the air I was breathing," said McManus, 37, who had problems with a bleeding kidney when she lived there. "But I don't know."

Federal and state officials don't know for sure, either. But they do know that people should be removed from the site, where children once played with the mercury as if it were clay.

According to Nepera and state officials, the story unfolds this way:

Back in 1947-48, the Pyridium Corp., which operated on the site where Nepera is today, provided fill for swamps on the Route 17M property. The fill contained mercuric sulfide. No one knows for sure how much contaminated fill was dumped there, Nepera spokeswoman Judy Hoffman said yesterday.

PHILIP KAMRASS/The Record

Health officials have discovered that a mercury compound was dumped nearly 50 years ago at a trailer site in Harriman. Route 17M is at right.

This past spring, a contractor looking at underground storage tanks at a nearby transmission shop went behind the trailers and found the fill. The trailer property's trustee had the material tested and sent the results to the state in July, said Mark VanValkenburg, an environmental health specialist with the state Health Department.

Normally, mercury is found in soils in concentrations of less than 1 part per million. The 12 tests taken at the Route 17M site showed concentrations of 110 to 653 parts per million, VanValkenburg said.

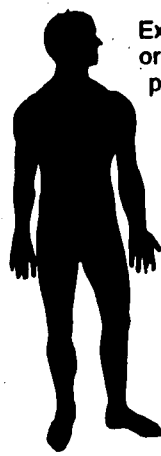
One part per million is about one drop of dye in 18 gallons of water.

Mercury can be absorbed through the mouth and nose in breathing as well as through the skin. Residents said they've been told they can take all their belongings with them except for carpets, which can contain mercury residue or dust.

McManus still owns two trailers on the site, and she recently spent $500 for wall-to-wall carpeting. That's not all she has to lose: Because of the threat that residents would be continually exposed to mercury if the trailers will stay behind, residents

See MERCURY pa

How mercury affects the body



Exposure to either organic or inorganic mercury can permanently damage the:

- Brain
- Kidneys
- Developing fetuses

The kidneys, in particular, are susceptible to damage from mercury.

Mercury is typically found in soils at levels less than one part per million (ppm). The site in question has levels ranging from 110 to 653 ppm.

Anyone with questions or information can call Nina Knapp at the state Health Department at 1-800-458-1158, ext. 402

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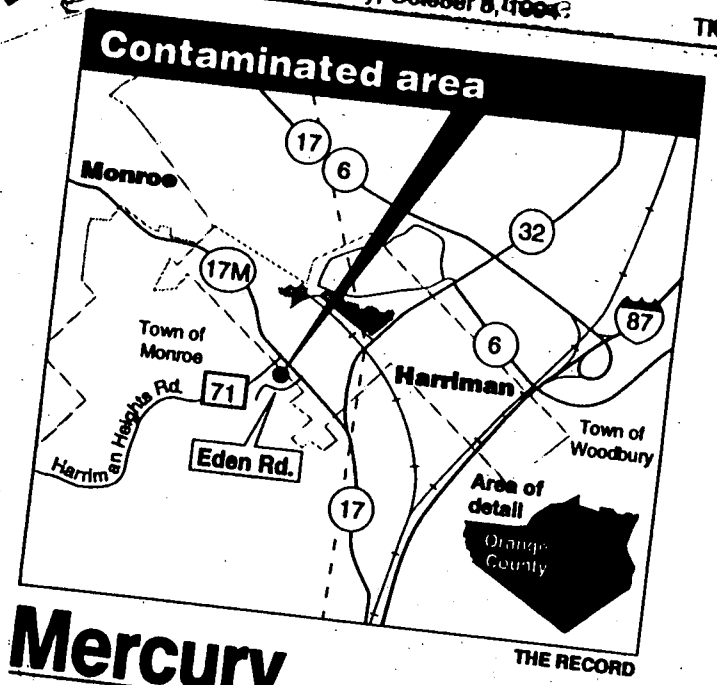


Mercury

From page 3

Hoffman of Nepera said the company is negotiating with the EPA to cover the relocation costs.

She said it's not clear that Pyridium Corp. is a direct ancestor of Nepera's. Nepera is fighting with the estate of the former company's owners over liability in court.

"We will accept responsibility and fight about the bill later," Hoffman said yesterday. "We did not want to make people wait until legal things were settled."

VanValkenburg said state officials will likely analyze residents' urine for traces of mercury. If traces are found, officials may reach out to former tenants. Of the 16 people there now, some just moved in last week and some have been there 25 years, he said.

Meanwhile, trailer residents are facing upheavals in their lives. Some declined comment yesterday, saying they've retained lawyers.

McManus' 70-year-old father, Leonard Giuliano, moved into one of her trailers six weeks ago. He tried to fill sinking holes in his backyard with leaves and branches, not knowing the holes were contaminated with mercury.

Resident Paul Cox, who's lived in a trailer for three years with his mother and older brother, said they're not looking to make a buck off their woes.

"We just want to get relocated and get out of here," Cox said.

Memory losses alarming

Contractor fears mercury contact

By CHRISTOPHER MELE
Staff Writer

HARRIMAN — Walden contractor Patrick Rifflard at first thought it was old age creeping up on him.

He'd be on his way with his wife, Dolores, to meet a customer when he would suddenly pull over.

"He'll say, 'Where are we going? I just blanked,'" Dolores Rifflard said.

Patrick Rifflard wonders if his memory losses are linked to two jobs he vividly remembers: working knee-deep in a mixture of soil muck and a "disgusting ... cement-like sludge" at a Harriman trailer park in 1992 and 1993.

It turns out that the "sludge" is a mercury compound, dumped at the Route 17M site with other fill nearly 50 years ago.

And, it also turns out, the mercury concentrations are so high that they're forcing 16 trailer tenants from their homes in perhaps as early as two weeks.

Exposure to mercury can permanently damage the kidneys, brain and developing fetuses. It can also lead to trouble remembering and concentrating.

"I have a hard time remembering what I did yesterday," Rifflard, 46, said yesterday. "I don't know whether it's related (to the diggings) or to blame it on getting old. My wife and mother-in-law can't believe how forgetful I am."

Rifflard wonders if his exposure to mercury has caused health problems.

Rifflard and co-worker Dan Overton had to jackhammer through the 18-inch frost last year to install an electrical line. For days, they dug through the soil and white, clay-like mercury deposits.

"It was kind of like chipping off soft stone," Overton said yesterday. "I remember saying to Riff, 'This isn't soil.' I'm not happy to know I had my hands on mercury."

Rifflard and Overton also worked at the site in 1992.

JEFF GOULDING/The Record

Patrick Rifflard of Walden installed an electrical conduit in this trailer in Harriman last year. He is concerned that recent losses of short-term memory might be linked to his wading in mercury-laced sludge at the trailer park, a former dump site. Sixteen park tenants are to be evacuated.

Overton, 44, of Modena, said he's had no health problems.

No one knows for sure whether Rifflard's medical problems are directly linked to mercury exposure, but state and federal health officials aren't taking any chances.

They are working with Nepera Inc., a Harriman chemical corporation, to relocate trailer park residents. A state health official said residents could be out as early as two weeks.

Tests at the site have shown readings as high as 653 times the normal concentration for mercury in soil.

Once residents are removed from the contamination source, any mercury that has accumulated in their bodies can begin breaking down, said Matthias Schleifer, assistant commissioner for environmental health at the Orange County Health Department.

Mercury has a half-life of 60 days. A chemical's half-life is the amount of time it takes for one half of it to be degraded.

Health officials said they'll likely conduct "biological monitoring" of residents through urine analysis. If those tests show traces of mercury, officials will probably reach out to former residents.

Nepera is assuming the relocation costs and responsibility until those issues are ultimately sorted out. Another company that once operated on Nepera's current site, Pyridium Corp., is believed to have provided contaminated fill for the Route 17M site's swampy areas in 1947-48.

Pyridium Corp. manufactured pyridium for use in urinary tract infections. Mercury was a waste product from that manufacturing process.

"This is what we've been told" about the dumping, Nepera spokeswoman Judy Hoffman said last week. "There's nobody with firsthand knowledge of what happened."

Village of Harriman Mayor Donald Humphrey yesterday assured residents that the village's water system is mercury-free.

None of the village's eight groundwater wells are on the contaminated site; the closest one is three-quarters of a mile away, he said.

JEFF GOULDING/The Record

Environmental Protection Agency workers Joseph Rotola, left, and George Zachos, center, watch as hired contractor Eric Wilson takes measurements during soil testing in Harriman yesterday.

Harriman soil tests set

Village residents fear spread of contamination

By AMY BETH TERDIMAN
Staff Writer

HARRIMAN — The state Health Department plans to test several sites in the Village of Harriman for possible soil contamination.

It is hoped the testing will put residents' minds at ease.

Health and environmental officials say that poisonous mercuric sulfide and calcium sulfate found around five mobile homes on Route 17M have not extended beyond that site. But residents want to know for sure — hence, the additional testing in other areas.

"It's a very localized issue for now," said Mayor Donald Humphrey. "But if swamp fill was put there (at the trailer park), where else could it possibly be? We want to know."

About 200 residents turned out for a two-hour public meeting Wednesday night to express fears that the contamination had spread to other areas. Health officials say it has not, and no evidence yet exists that other sites are contaminated.

Others approached Humphrey and the Health Department this week, suggesting other sites that might be, like the trailer park, filled-in swamp or wetlands.

Workers have already tested two sites — one off Route 17M by an abandoned bus garage, and the other off North Main Street, which runs parallel to the Ramapo River, he said. They found no evidence of contamination.

The Health Department has also said it would test soil near the two elementary schools in Harriman, but believes those sites are also pollution-free.

"This is just a sanity check to give everybody a little bit more peace of mind," said Mark Knudsen of the state Health Department.

Meanwhile, Environmental Protection Agency workers continue to test the soil around the trailer park to find exaclty where the pollution ends. Testing should be fin-

See TESTING page 12

The Times Herald RECORD Friday, October 14, 1994

JEFF GOULDING/The Record

Passing a test

Geologist Joe Filosa uses an instrument to detect the amount of mercury in the soil yesterday in a Village of Harriman test site. In the background, Eric Wilson prepares another test. It is hoped the testing will put residents' minds at ease. Contamination near five mobile homes on Route 17M has raised concerns. Story, page 3.

THE TIMES HERALD RECORD FRI., OCT. 14, 1994

Love Canal lessons shared

By AMY BETH TERDIMAN
Staff Writer

HARRIMAN — Lois Gibbs said she can understand the fears and frustrations of 16 Harriman residents who have to move their families after a poisonous compound was found on their property.

She went through a similar process in 1980 as one of 900 residents who had to be moved from Love Canal, a development near Niagara Falls where 20,000 tons of chemicals were discovered in the late 1970s.

"They could have given me $10 for my house and land and I would have taken it just so I could get out of there," she said. "It's more the fear of possible health risks that stay with you. That never goes away."

The poisonous mercuric sulfide and calcium sulfate found around five mobile homes on Route 17M in Harriman are not nearly as dangerous or as widespread as the poisonous chemicals at Love Canal, but health officials say it is necessary to get people off the one-acre site as quickly as possible. How soon that will happen, officials cannot say.

Residents may have to give urine samples to health officials as early as next week to be tested for traces of mercury. If mercury is found in current residents' systems, tests may be expanded to include former residents, said Mark VanValkenburg, of the State Department of Health.

Last weekend, workers from the Environmental Protection Agency collected about 90 samples of soil from the site to determine where the contamination ends. Results should be available by the end of the month, said Joseph Rotola, EPA spokesman.

Officials at Nepera Inc., a Harriman-based chemical company, said they plan to hire a relocation consultant in coming weeks to help move the residents. The company has agreed to pay for the relocation until it finds the party responsible for dumping the contaminated fill.

The Pyridium Corp., which operated where Nepera is today, is believed to have dumped the fill in 1947 or 1948. The company was owned by the Lasdon brothers, said Peter Thauer, a lawyer for the Cambrex Corp., which owns Nepera.

Gibbs said she was pleased that the relocation process in Harriman has already started. It took about two years for residents to convince health officials that they needed to move off the Love Canal site.

"It's not like a flood or natural disaster where you can say, 'OK, the house is destroyed. I broke my arm. The car was washed away,'" she said. "There you know your losses ... In this case, you don't know till you get sick."

She and her family were given $20,000 for their house, and $500 to $1,000 to move their belongings. They moved temporarily to the City of Niagara in 1980.

Soon after, they moved to Virginia, where she started the Citizen's Clearinghouse for Hazardous Waste for people with environmental concerns. The organization has been involved in 15 other relocations in the country.

Gibbs offered the following advice for residents living at the trailer park:

Hire one negotiator to represent the group when dealing with Nepera and EPA officials.

Hire an independent assessor to determine the value of the homes before interviews with the EPA and consultants begin.

Keep in mind the costs of future hook-ups for sewers, phone lines, water and other utilities when looking for a new home. Also include the cost to replace or to clean and move furniture.

Remember that money for relocation must be spent within two years or else it will be taxed.

The Citizens Clearinghouse published a 44-page book about the relocation process with tips for homeowners. For more information, call (703) 237-2249.

Experts expand soil tests

Fill at second Harriman site analyzed

By AMY BETH TERDIMAN
Staff Writer

HARRIMAN — Federal and state officials have expanded soil testing to another site in the village — and found fill that looks like that uncovered at a contaminated trailer park.

Representatives of the U.S. Environmental Protection Agency and the state Health Department yesterday said they can't tell if the new site is contaminated with mercury, as is the trailer park on Route 17M, where fill was dumped in the 1940s to make it suitable for building.

"It looked like the same material that was found in the trailer site, but we won't know until it is analyzed," said Nina Knapp, a Health Department spokeswoman.

Test results from the latest site and from the trailer park are expected this week.

Health and Village of Harriman officials said they wouldn't reveal the location of the site or the homeowner's name until they had received results from soil samples taken Friday. The site is within a quarter-mile of the five mobile homes on Route 17M where poisonous mercuric sulfide and calcium sulfate were found in the soil, Knapp said.

"It could be gypsum wallboard here for all I know," said Village Mayor Donald Humphrey. "We just want to be certain that we know what (the substance) is first for peace of mind."

Humphrey said a Harriman resident who lived in the area in the 1940s and '50s told the homeowner that trucks dumped fill into the swamp where the house now sits. The homeowner last week contacted the code enforcement officer, who then called the Health Department.

"We want to make sure we've turned this thing upside-down and examined everything," the mayor said. He encouraged residents who have concerns — or possible new leads — to contact him or the village's code enforcement officer.

Knapp said there was a low risk of contamination for the homeowner and neighbors because the white, claylike substance was found 5 to 6 inches under ground and had a layer of grass covering it. Also, the house was built before the fill was dumped.

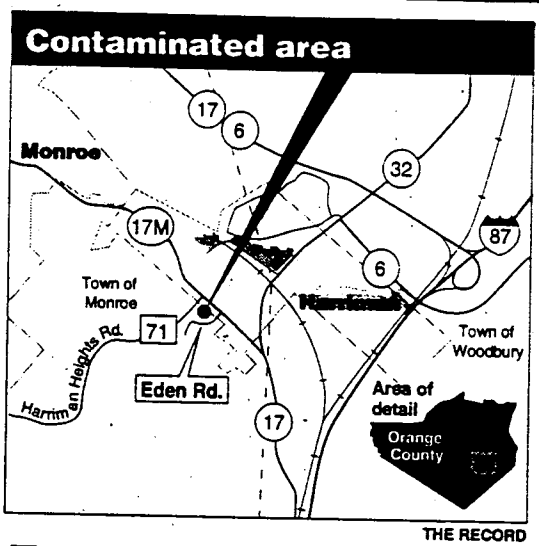
The homeowner was warned not to dig in the ground, Knapp said.

At the mobile home site, the white material was found on the soil's surface and was easy to see, she said. Those residents will be moved out of the park in coming weeks because of the high risk of contamination, she said.

The Health Department looked at three other sites for contamination but found no sign of the mercury compound, Knapp said. Test results show the village water system is safe.

Meanwhile, a relocation consultant from West Virginia will begin meeting with trailer park residents today to determine where the people will move and what it will cost. Nepera, a Harriman-based chemical company, has agreed to pay for the relocation.

The Times Herald RECORD Saturday, December 31, 1994



THE RECORD

New year will bring new start

Toxic site residents prepare to relocate

By AMY BETH TERDIMAN
Staff Writer

HARRIMAN – The Lundgrens will start the new year with a new home after the trailer park site where they now live was found to be contaminated with toxic levels of mercury.

"It was just a tragedy to have to move because of the mercury. But we are fine and life goes on. Now we're moving forward."
— Vera Cox, resident

The Lundgrens and three other families living at the Route 17M site are expected to leave their mobile homes behind and move off the property by the end of January. All have reached agreements with Nepera Inc., a Harriman-based chemical company that has agreed to pay for relocation costs.

The Cox family, which also lived at the Route 17M site until recently, moved to a trailer park down the road on Dec. 15.

"It was just a tragedy to have to move because of the mercury," said Vera Cox. "But we are fine and life goes on. Now we're moving forward."

Cox would not say how much her settlement was, but said the money was used for a down payment on a new trailer. Her family rented one at the Route 17M site.

After the residents move, U.S. Environmental Protection Agency workers will begin cleaning up the site. Workers will likely decontaminate the trailers, move them, and haul away some 4,000 cubic yards of the white, claylike substance in the soil.

Workers will also scoop away about 500 cubic yards of contaminated soil from a second site at 10 S. Main St.

Toxic site residents prepare to relocate

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Workers will also scoop away about 500 cubic yards of contaminated soil from a second site at 40 S. Main St. The residents there will not have to move.

A chemical company called Pyridium Corp., which operated where Nepera now sits, is believed to have dumped calcium sulfate laced with poisonous mercuric sulfide at the two sites in the late 1940s to make the land there suitable for building.

Nepera has only agreed to pay to relocate the 16 people living at the trailer site. The company will not accept any responsibility or liability for the mercury contamination there.

It is not clear whether Pyridium Corp. is a direct ancestor of Nepera. Nepera is fighting in court with the Lasden Estate, Pyridium's former owners, over liability.

Tests showed readings as high as 653 times the normal concentration for mercury in the trailer park soil. Urine tests of the residents, however, did not find any unsafe levels of mercury.

Cindy Lundgren, who lives in a mobile home with her husband and son, had a baby boy on Dec. 16. Doctors say her baby is also free of mercury contamination.

"It's going to be a good start to the New Year," she said.

editorial

Mercury deposit remains a mystery

Nepera chemical company's immediate offer to pick up the relocation costs for 16 residents of a nearby mercury-contaminated trailer park in the Village of Harriman is commendable. Nevertheless, disturbing questions about the contamination linger.

Namely, has it caused permanent health problems for anyone who came into contact with it? And how in the world could so much mercuric sulfide, dumped almost 50 years ago to fill swamps, go undetected for so long? The trailer park has been there for decades. Did no one wonder about the strange, milky-white substance that infested the soil in front, behind and underneath the trailers?

Did no one wonder about the strange, milky-white substance that infested the soil in front, behind and underneath the trailers?

Apparently not. The material was not tested until after a contractor noticed the fill this past spring. The trailer property's trustee sent it to the state in July. Tests found readings as high as 653 times the normal concentration for mercury in the soil. Mercury can cause permanent damage to the brain, kidneys and developing fetuses. It can also affect memory.

Obviously, this mess will have to be cleaned up, but who will do it and how will it be done?

Despite its offer to relocate residents, Nepera may not be legally responsible for the contamination. The mercury was apparently dumped there by a now-defunct company, the [redacted] which operated on the site where Nepera is today. Pyridium may or may not be an ancestor of Nepera. That's another one of the questions that has to be answered. It is currently before the courts, but neither the state nor Nepera should wait for the verdict. They should start cleaning up the toxic fill as soon as residents are moved out. Figure out who foots the bill later.

Village water mercury free, mayor tells residents

Effects of mercury exposure

If you are exposed to mercury many factors will determine whether you will suffer harmful effects, what those effects are and how severe they will be. Some of these factors are: the duration of the exposure, the concentration of the toxin, how you were exposed and the general state of your health. You can be exposed by skin contact, by breathing contaminated air, or ingesting contaminated food or water. Children are more susceptible to mercury poisoning because their developing nervous systems are more sensitive to these compounds.

Long-term exposure to mercury can permanently damage the brain, kidneys and developing fetus. It has also caused some people to develop shakiness and memory loss. The most sensitive target to either long or short-term exposure is the nervous system. Full recovery is more likely after short-term than long-term exposure, once the contamination clears the body.

Exposure to mercury can be determined by testing blood and urine. The levels found there may show whether or not you'd be expected to have any health effects.

There is no information to show that mercury causes cancer in humans or animals.

Anyone with questions or information can call Nina Knapp at the state Health Department at 1-800-458-1158, ext. 402.

Source: U.S. Dept. of Health and Human Services

By AMY BETH TERDIMAN
Staff Writer

HARRIMAN — The Hedge family moved to Harriman in the late 1960s and raised four children in their trailer — all of whom have learning disabilities.

Now a lawyer representing the family says he thinks the children's condition is linked to the high concentrations of a mercury compound found in the soil at the Route 17M site.

"We feel that there is a strong probability that the waste there caused some neurological problems with these people," said Brian Sichol, who is representing the Hedges and the Lundgrens, another family who live on the site.

State health and federal environmental officials will meet at 10 a.m. today with representatives of Nepera Inc., a Harriman-based chemical company, to decide when and how to relocate the 16 people living in the trailer park. Nepera has agreed for now to assume all costs for the relocation.

Village of Harriman officials will hold a public meeting at 7:30 p.m. today to try to allay fears in the community that the mercury contamination has spread to other areas. It hasn't. Mayor Donald Humphrey assured residents that the village's water system is mercury-free.

None of the village's eight groundwater wells is on the contaminated site. Mercury, which does not dissolve in water has not appeared in any tests, Humphrey said.

But several questions remain:

- Workers are now trying to determine where the contaminated soil ends, said a spokesman for the Environmental Protection Agency. "We're not concerned with how much is there right now, but where it is," said Joe Rotola.

To do that, workers dressed in protective white clothing and wearing respirators will start where mercury levels are highest — at about 635 parts per million. They will then move in circles around that spot, using stainless-steel spatulas to scoop soil into pint-sized glass jars, which will be sent away for testing.

Workers may also use an X-ray refraction machine, which takes a chemical snapshot of the soil.

With these methods workers will be able to say where traces of mercury are normal — around 11 part per million.

- State health officials have not yet decided how to monitor people living at the site for possible health problems.
- Officials do not yet know how much it will cost to relocate people or what will happen to the site.

Some relocations have cost the EPA millions of dollars. In one case near Niagara Falls, 57 families had to move after dangerous chemical compounds were found in the soil. The site now sits empty.

Other cleanups were not so expensive. In 1988, EPA officials found mercury in the soil at another trailer park near Niagara Falls. Levels there were about 100 parts per million. Workers removed contaminated soil from the site while residents were at work during the day.

Health officials said it would be less expensive to move the Harriman residents than to clean up around them.

For now, the EPA said it has warned people living in the trailer park not to eat any vegetables that may have been grown in the soil and to make sure they do not track dirt and mud into their homes.

"It's basic housekeeping," Rotola said. "Don't play in the dirt. Don't track large white particles into the house on your shoes. And wipe your feet."

The Times Herald RECORD >>> Wednesday, October 12, 1994

EPA searches for extent of contamination

By AMY BETH TERDIMAN
Staff Writer

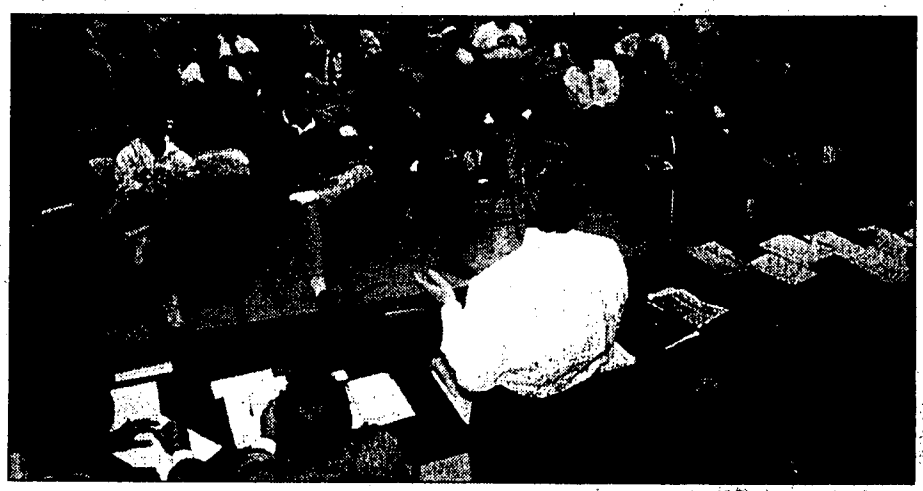
HARRIMAN — Environmental Protection Agency workers today will scour the area around a contaminated trailer park on Route 17M to find out exactly where the pollution ends.

About 200 Harriman residents packed the gymnasium of the Harriman Elementary School last night to express fears that the poisonous mercuric sulfide and calcium sulfate found in the soil around five mobile homes had somehow made its way into homes and drinking water throughout the village. Health officials say it has not.

"Right now, we know that the contamination is limited to the area of the trailer park, but we don't know the boundaries," said Village Mayor Donald Humphrey. "We know that the 16 people living there now have got to be moved."

And the village will receive results tomorrow of an emergency water test that specifically looks for mercury. A water test done in June showed no evidence of contamination.

"People are concerned about driving by the site or walking by the site," said one State Health Department official. "There is always the potential for exposure. But given the form that it's in, we believe it doesn't evaporate readily and can't be inhaled ... The risk from casual exposure is low."



J. TALBOTT/The Record

Mark Knudsen of the New York State Department of Health explains what his department is doing about a toxic waste area in Harriman during a meeting last night at Harriman Elementary School.

State and federal environmental and health officials, along with village officials, spent nearly two hours last night trying to answer questions and allay fears.

Some residents wanted to know whether children cutting through the trailer park on their way to Route 17M could track the mercury compound into their homes. Others wanted to know whether employees at Nepera Inc., a Harriman-based chemical company near the site, were at risk. Traces of the mercury were found in soil taken from the company's parking lot.

But health officials could not answer their questions.

What they did know is that the people living at the site will possibly be moved within a month. Nepera has agreed for now to assume all costs for the relocation.

Hank Gross, who lived at the site from 1958 to 1970, said one of his sons has a nervous condition, the other has a skin disorder. He wanted to know whether their conditions were linked to the contamination.

"My kids played in that clay as if it were Play Dough," he said. "One of my sons sank to his waist in it and I had to yank him out."

Artie Block, of the Agency for Toxic Substances and Diseases Registry, said that organs or tissues may have be damaged by the mercury compound, but it would be difficult to find a link now.

The Times Herald RECORD, Thursday, October 13, 1994

EPA REGIONAL GUIDANCE DOCUMENTS

The following documents are available for public review at the EPA Region II Field Office, Raritan Depot, Woodbridge Avenue, Edison, New Jersey during regular business hours. Contact Irmee Huhn at (908) 906-6813 for more information.

* Glossary of EPA Acronyms.

* Superfund Removal Procedures--Revision #3. OSWER Directive 9360.0-03B, February 1988.

* Hazardous Waste Operations and Emergency Response.
  Notice of Proposed Rule making and Public Hearings.
  29 CFR Part 1910, Monday, August 10, 1987.

* Guidance on Implementation of Revised Statutory Limits on Removal Action.
  OSWER Directive 9260.0-12, May 25, 1988.

* Redelegation of Authority under CERCLA and SARA.
  OSWER Directive 9012.10, May 25, 1988.

* Removal Cost Management Manual.
  OSWFR Directive 9360.0-02B, April, 1988.

* Field Standard Operating Procedures (FSOP).
  #4 Site Entry.
  #6 Work Zones.
  #8 Air Surveillance.
  #9 Site Safety Plan.

* Standard Operating Safety Guides -- U.S. EPA Office of Emergency and Remedial Response, July 5, 1988.

* CERCLA Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Superfund).

* SARA: Superfund Amendments and Reauthorization Act of 1986.

* NCP: National Oil and Hazardous Substances Pollution Contingency Plan. - Publication No. 9200.2-14.

* Guidance on Implementation of the "Contribute to Efficient Remedial Performance" Provision - Publication No. 9360.0-13.

Additional Guidance Documents are listed below and are available for review at the EPA Region II Removal Records Center.

* The Role of Expedited Response Actions (EPA) Under SARA - Publication No. 9360.0-15.

* Guidance on Non-NPL Removal Actions Involving Nationally Significant or Precedent Setting Issues - Publication No. 9360.0-19.

* ARARS During Removal Actions - Publication No. 9360.3-02.

* Consideration of ARARS During Removal Actions -Publication No. 9360.3-02FS.

* Public Participation for OSCs - Community Relations and the Administrative Record - Publication No.9360.3-05.

* Superfund Removal Procedures - Removal Enforcement Guidance for On-Scene Coordinators - Publication No. 9360.3-06.

* QA/QC for Removal Actions - Publication No. 9360.4-01.

* Compendium for ERT Air Sampling Procedures - Publication No. 9360.4-05.